

# Manufacturers Record

Industry Construction



BALTIMORE, MD.

SEPTEMBER 24, 1931

## Moves to Restore Confidence

The recent announcement by the Comptroller of the Currency, responsible under the law for the conduct of the national banks of the country, that bonds of first rating held in banks' portfolios do not have to be marked down to current quotations, has been followed by another move by the Administration of unusual importance.

The reserves of the Federal Reserve System, it is said, are to be employed as far as safety and sound practice permit to free frozen assets in embarrassed member and non-member banks. Quick credits are to be given those in need.

Sound values do exist then, in spite of the welter of wild ideas, doubts, fears and dire forebodings. Someone in authority does believe that triple A bonds and the property back of them are not to be judged solely by market quotations in a time of unreason and panic. These statements of policy by the Administration are likely to be outstandingly helpful.

It is not too much to say that they can well be the means of turning the tide of fear into confidence. Confidence in our banks and our banking system is a requisite to healthy, progressive business and there can be no doubt of the fact that huge withdrawals of funds from banks have been made by individuals because of fear. It is also true that, notwithstanding low call money rates and the apparent plentitude of money and gold reserves, credit has been restricted.

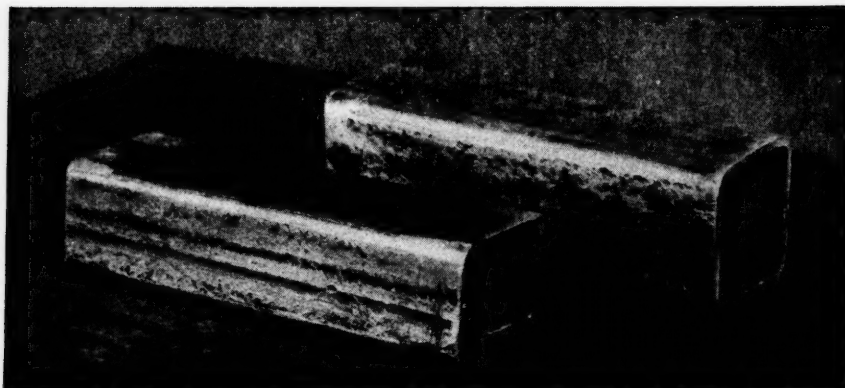
Bankers have been complaining of the unnecessary restrictions imposed by the Federal Reserve banks in the matter of eligible paper. It would be well if present rules in this direction could be reviewed and these restrictions lightened.

The cry for the past two years has been for liquidity. Bankers themselves for reasons of safety, thought necessary, have become almost fanatical on the point. Complete liquidity means no credit. It means cash on the barrelhead. It means virtually a stoppage of business.

These things point the way to hopefulness, to a revaluation that will put business on the upgrade, and that comports better with the spirit of America than the gloom which has been prevalent all too long.

# SQUARE

*and* **R**ECTANGULAR  
TUBING.... *for modern*  
....CONSTRUCTION



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CINCINNATI . Union Trust Bldg.  
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The Youngstown Steel Products  
Company, Dashwood House, Old  
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**A**NOTHER "YOUNGSTOWN" product that is serving industry in countless ways, offering decided advantages in scores of construction and fabricating uses. / Youngstown Square and Rectangular Tubing is strong, durable, and economical; it is easy to fabricate, easy to weld, uniform and non-warping. / Our nearest district office will be glad to advise you about these products and their advantages for your particular construction or fabricating needs.

**THE YOUNGSTOWN SHEET AND TUBE COMPANY**

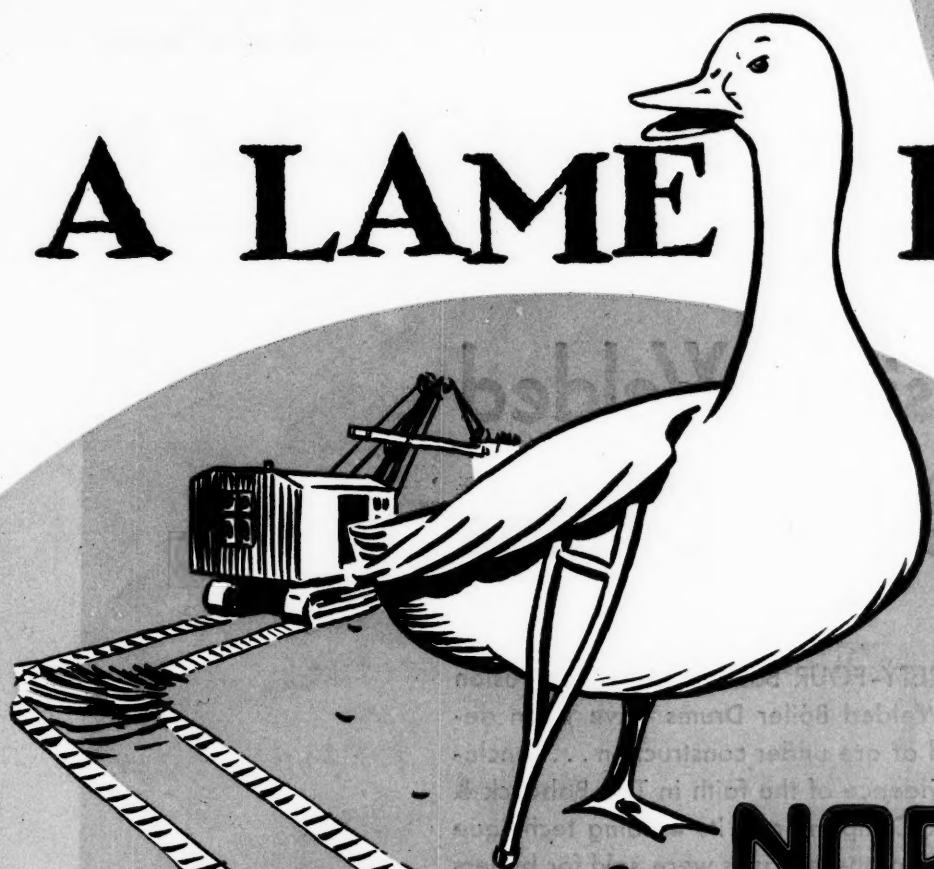
*One of the oldest manufacturers of copper-steel, under the well-known and established trade name "Copperoid"*

**GENERAL OFFICES — YOUNGSTOWN, OHIO**

# Y O U N G S T O W N



# A LAME DUCK -



# OR A NORTHWEST?

**W**HAT'S your choice? Easy mobility that negotiates all ground conditions or "lame duck" action that "limps" around the curves on one live crawler.

The Northwest gives you positive traction—full power on both crawlers even when turning. It brings you  $2\frac{1}{2}$  times the travelling power on the turns when you need traction most.

Compare this with the inefficient "block and skid" method where all the power and strain is thrown on one crawler that must force the massive dead weight of the other over or through the earth's crust to turn it.

Ask yourself which is the right way to steer a shovel.

You need this mobility and once you have it you will wonder how you got along without it. Why not ask about it?

## NORTHWEST ENGINEERING CO.

*The world's largest exclusive builders of gasoline, oil burning and electric powered shovels, cranes and draglines*

1733 Steger Building      28 East Jackson Boulevard  
Chicago, Ill., U. S. A.



THIS  
IS  
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3



MR 9-24 Gray

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Memphis, Tenn.  
Second at Butler.

Dallas, Texas  
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New Orleans, La.  
816 Howard Ave.  
Baltimore, Md.  
15 W. Franklin St.

# Fusion Welded Boiler Drums

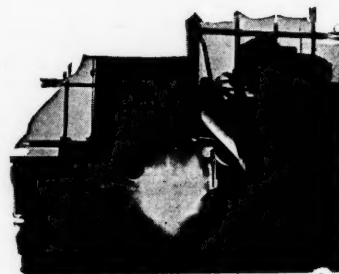
**N**INETY-FOUR Babcock & Wilcox Fusion Welded Boiler Drums have been delivered or are under construction . . . conclusive evidence of the faith in The Babcock & Wilcox Company and its welding technique since all of these drums were sold for boilers not affected by the A. S. M. E. Code.

An analysis of these contracts discloses widely diversified interest in drums of this construction. Installations in ten states will include Automotive . . . Alcohol . . . Meat Packing . . . Metal Working . . . Paper . . . Steel . . . Tobacco . . . Vegetable Oil and Municipal Plants. The others will be used in one United States Navy Aircraft Carrier and in five Scout Cruisers.

The working pressure of these boilers varies from 150 to 500 pounds per square inch . . . those for the Navy delivering steam at 320 pounds while over half of the stationary boilers operate above 200 pounds pressure.

• Six years ago The Babcock & Wilcox Company foresaw that the increase in the size and weight of boiler drums would make the substitution of fusion welding for riveting very desirable and in the interval . . . through research of the most fundamental and searching character . . . developed an entirely satisfactory fusion welding technique. The Company is now prepared to supply all of its boiler drums in accordance with the A. S. M. E. Code for Fusion Welding and strongly recommends this construction.

THE  
**BABCOCK & WILCOX**  
85 LIBERTY ST. COMPANY NEW YORK, N. Y.





# What's 90 years to a Cast Iron Pipe!



**A** CONSTRUCTION crew of the Board of Water Supply of New York City were cutting out a piece of a 90-year-old water main to install a new valve. Representatives of the engineering press and Water Department officials watched them pounding away at that sturdy old pipe with chisels and sledges. Tough! Before it was cut through, diamond points and cold chisels were splintered and frayed as though they were tin.

On inspection, the removed length of pipe proved to be in excellent condition, indicating that this 90-year-old cast iron main will continue to serve New York's taxpayers, and save them money, for many years to come.

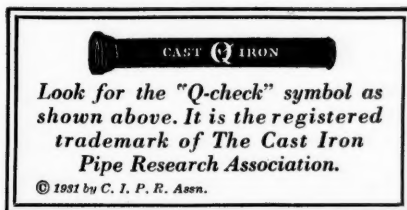
❖ ❖ ❖

How long is the life of cast iron pipe? For cost computing purposes, engineers rate the minimum useful life of cast iron pipe at 100 years, far beyond that of any other material. A writer in the May issue of the Journal of the American Water Works Association answers the question for himself by saying "Five hundred years or more."

In France, a cast iron pipe line from Marly on the Seine River to Versailles (about six miles) has been in continuous service for 267 years. In America, cast iron water and gas mains that were installed



Representatives of engineering publications and American Water Works Association assembled at East Broadway and Montgomery Street, New York City, to inspect section of 90-year-old cast iron pipe removed to cut in a valve. The pipe was exceedingly tough and in excellent condition.



over a century ago are still giving satisfactory service.

The reason for the long life of cast iron pipe is its effective resistance to rust. Cast iron is the one ferrous metal for water and gas mains, and for sewer construction, that will not disintegrate from rust. This characteristic makes cast iron pipe the most practicable for underground mains since rust will not destroy it.

Every taxpayer should take an active interest in the kind of pipe being laid, or to be laid, in his community. For further information write to The Cast Iron Pipe Research Association, Thomas F. Wolfe, Research Engineer, 122 South Michigan Avenue, Chicago, Ill.

❖ ❖ ❖

Cast iron pipe bearing the "Q-check" trademark is obtainable from the following leading pipe founders: Alabama Pipe Company, Anniston, Ala.; American Cast Iron Pipe Company, Birmingham, Ala.; James B. Clow & Sons, 219 N. Talman Ave., Chicago, Ill.; Donaldson Iron Company, Emaus, Pa.; Glamorgan Pipe and Foundry Company, Lynchburg, Va.; Lynchburg Foundry Company, Lynchburg, Va.; National Cast Iron Pipe Company, Birmingham, Ala.; United States Pipe and Foundry Company, Burlington, N. J.; Warren Foundry and Pipe Corporation, 11 Broadway, New York.

## CAST IRON PIPE

┌ The above page advertisement of The Cast Iron Pipe Research Association will appear in Time, September, 21st—Collier's, October 24th—Saturday Evening Post, October 31st ┐



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**the new**  
**EARLE GEARS**  
**BOOK!**

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This catalog contains in its one hundred pages interesting photographs of gears and machinery, gear tables, gear formulae and data which every gear user should have. We would be pleased to mail to any Executive or Engineer his free copy upon request.

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Practically all your transmission needs can be met with Diamond Drives from stock. A nearby Diamond Distributor can supply you immediately motor drives ranging from  $\frac{1}{4}$  to 75 h. p., 600 to 1800 r.p.m., 1/1 to 8.4/1 ratios. Furthermore, the Stock Drive makes selection and ordering a matter of minutes.

ALWAYS ROLLING...  
ALWAYS ANTI-FRICTION

EVERYWHERE  
proving its  
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As a high-speed motor drive in a vitreous-marble plant and outlasting another type drive three to one—

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As a delicate precision element on a talking picture projector—

As a front-to-back-wheel drive on a Twin-Flex truck loaded with 3 tons of concrete driven for 7000 miles at 45 m. p. h. over the worst roads in 7 states—

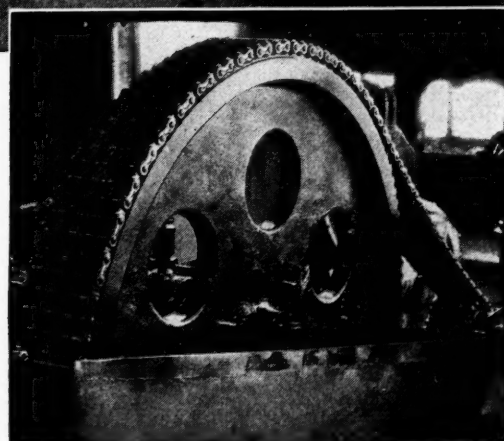
As a superior Timing Drive in diesel engines.

—Everywhere the Diamond Drive is proving its superiority.

Everywhere rolling contacts and a design that permits wear parts to be treated for wear resistance alone—are demonstrating their superiority . . . in longer life, in less attention required, in turning maintenance expenditure into maintenance savings.

The Diamond Drive operates with equal efficiency on long or short centers, on high or low speeds, on "wrong" side as well as right. It brings a new quietness, a greater compactness, an increased flexibility of application to your transmission unit and design.

The Power Drive Booklet No. 102B shows the new economies you can institute on motor or shaft drives.



The Machine Design Booklet No. 104B shows 8 interesting classes of machine application. Either or both sent without cost or obligation.

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AFTER YEARS OF USE

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Please send copy of

☐ Booklet 102B Power Drive Applications

☐ Booklet 104B Machine Drive Applications

Name \_\_\_\_\_

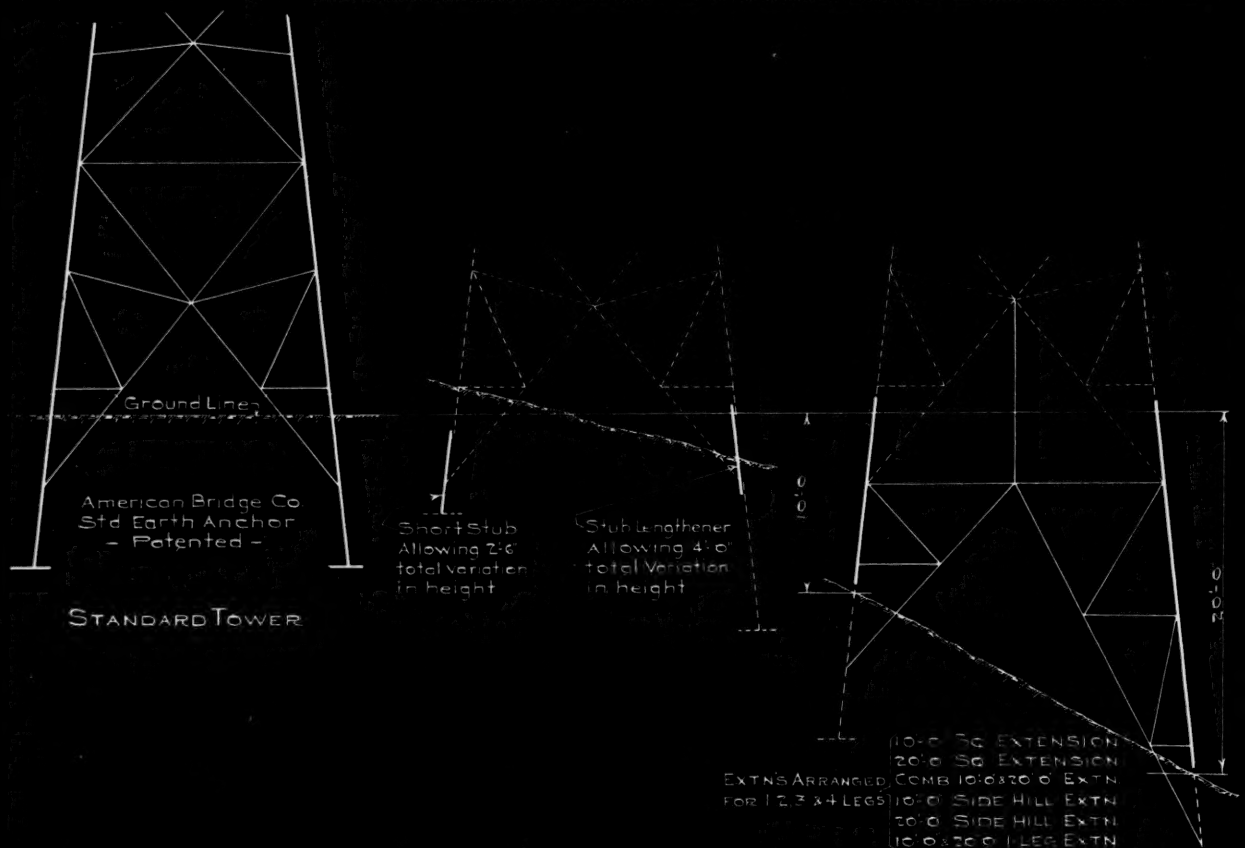
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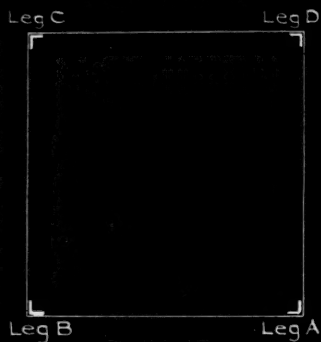
(A-4155)

# ABC TRANSMISSION TOWERS



With the above Short Stubs, Stub Lengtheners and Extensions, including only 14 different members, it is possible to obtain the necessary variations to fit contour of ground at tower base.

The following are typical examples:



Ex 1  
Leg A 1 Short Stub  
Leg B 1 Stub Lengthener  
Leg C 1 10'-0" Extension  
Leg D Standard Stub

Ex 2  
1-10'-0" Extension  
1-20'-0" Extension  
1-10'-0" Extension + 1 Stub Lengthener  
1 Standard Stub

With above variable extensions considerable expense can be saved in excavation and sorting of material in field.

## AMERICAN BRIDGE COMPANY

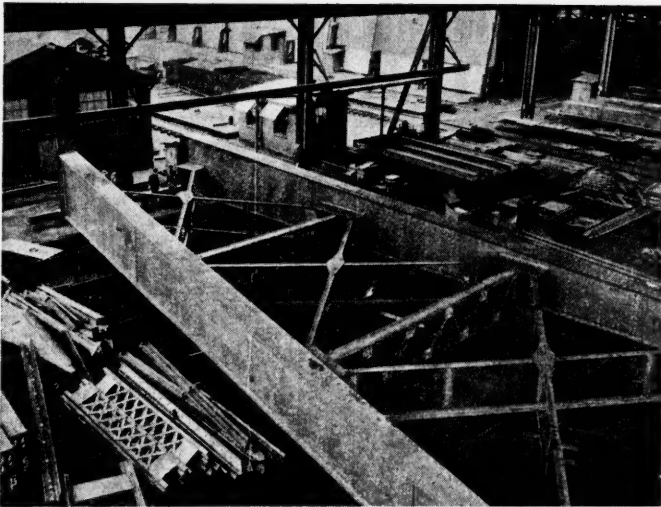
Subsidiary of United States Steel Corporation

General Offices: 71 Broadway, New York City

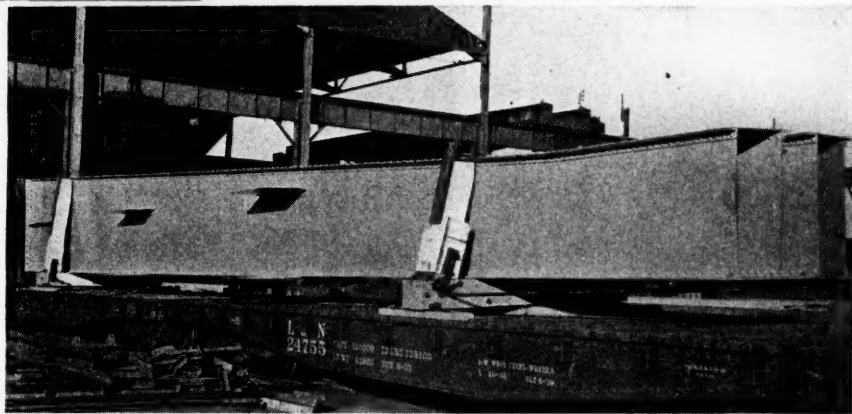


Tower Department, Frick Bldg., Pittsburgh, Pa.



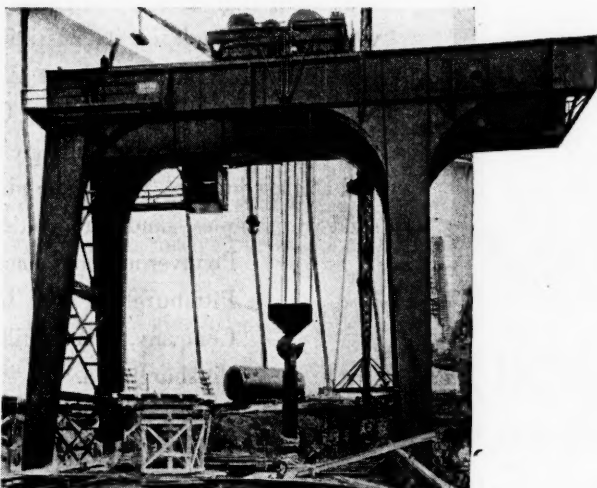


These two pictures show sections of the main steel work being manufactured and shipped from our Birmingham Plant for the 350-ton Gantry Crane built by the Whiting Corporation for the Ariel Dam, Woodlawn, Wash. Below is the completed crane in operation. Phoenix Utility Co., New York, Engineers.



## GRIST TO THE MILL

### Careful Shop Work Insures Good Fit and Speedy Erection



Our plants do many different kinds of steel construction besides steel bridges and buildings. If you want it built of steel we can do it and likely have.

From Birmingham, Ala., to Woodlawn, Wash., was quite a step, but in distance only. Manufacture of the steel for this 350-ton crane presented no unusual difficulties to our facilities and organization.

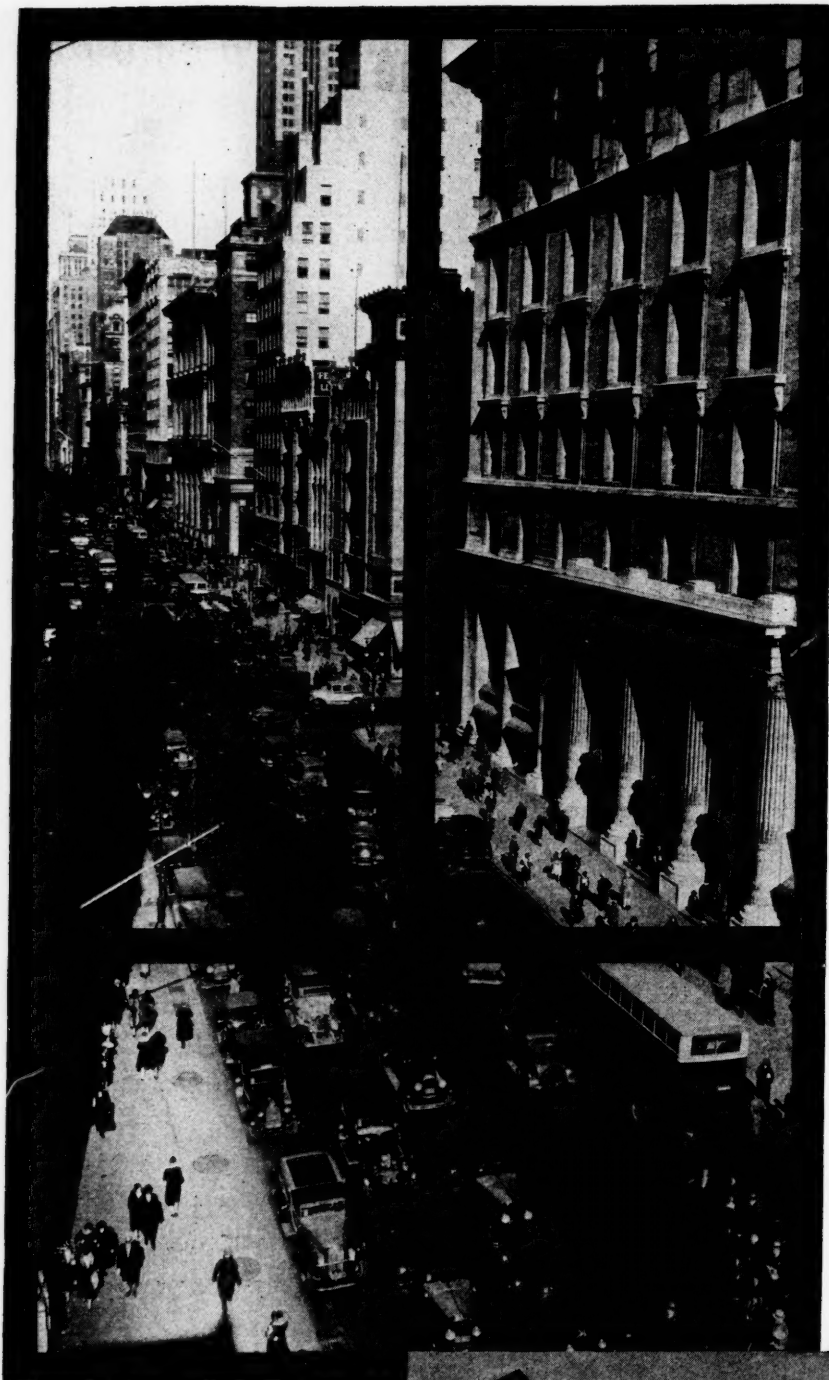
We have had many years experience on many different kinds of work, and shall be glad to give you our best thought on your problems of design and construction, steel or possible steel.

**VIRGINIA BRIDGE & IRON CO.**  
Roanoke, Birmingham, Memphis, Atlanta, New Orleans  
New York, Los Angeles, Charlotte, Dallas, El Paso

Plants at Roanoke—Birmingham—Memphis

# Window Glass

*must be* **FLAT** *to be*  
**CLEAR!**



**W**INDOWS that give a true perspective of the view beyond them...windows that have a fine transparency unmarred by distorting defects...windows that add to the beauty of their surroundings...such windows are an impossibility unless the window glass is truly flat.

It is in this essential flatness that Pennvernon Window Glass so far excels ordinary glass. For Pennvernon, due to our exclusive manufacturing process of flat drawing, has a flatness never before equalled in fire finished glass.

As a result, Pennvernon is clearer, more transparent, freer from the unsightly defects so common in ordinary glass. And the surfaces of a sheet of Pennvernon are brighter, more brilliantly reflective, more nearly parallel. Yet Pennvernon is no more expensive than ordinary window glass.

It will pay you to investigate Pennvernon Glass and see its possibilities for yourself. It is available at all the warehouses of the Pittsburgh Plate Glass Company—one in every leading city—and at glass jobbers. We will be glad to send you samples—and our booklet on

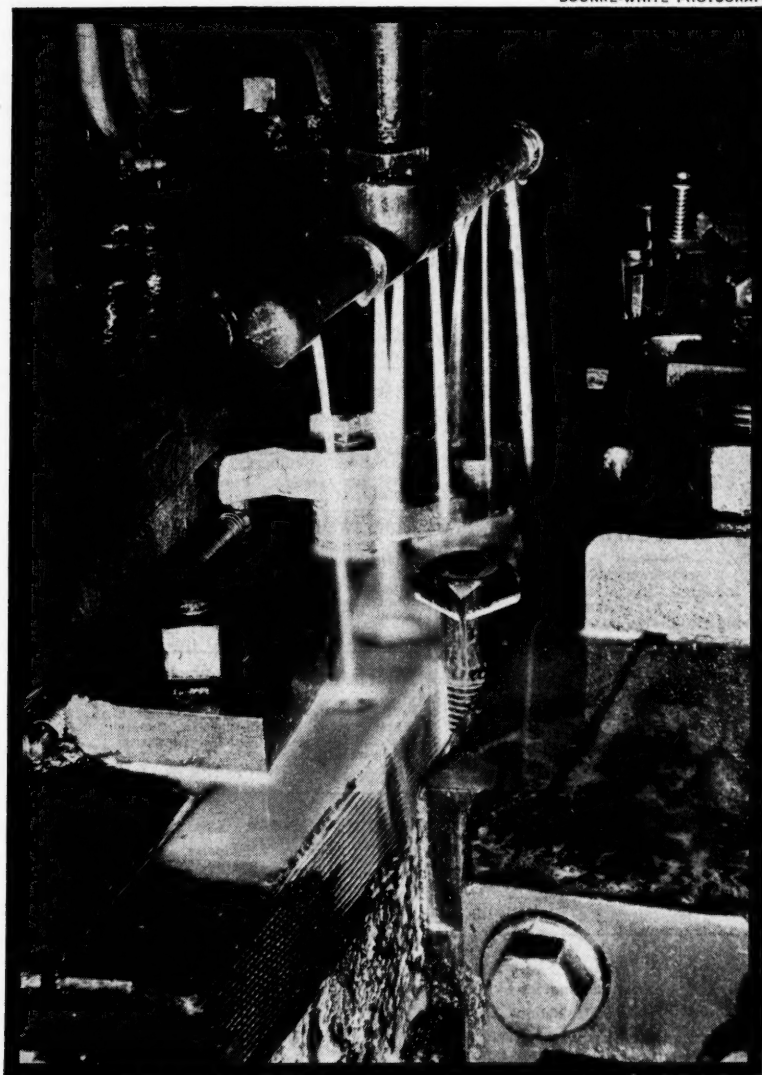
Pennvernon manufacture.  
Pittsburgh Plate Glass  
Company, Grant Building,  
Pittsburgh, Pa.



**Pennvernon**  
*flat drawn*  
**WINDOW GLASS**

# DO YOU MACHINE PARTS THAT COULD BE MADE CHEAPER BY UPSETTING?

BOURKE-WHITE PHOTOGRAPH



Here's how one manufacturer cut costs through the R B & W bolt-making processes, which can produce many metal parts economically

He makes an important accessory used by the aviation industry. It is the highest quality product of its kind, selling for 18 times as much as similar competitive products, the price differential being reasonable because of the increased hours of service obtained.

Quality of materials in this man's product is paramount to cost.

But we found a way to save him considerable money on one part of his product. When we discovered him he was machining this part from a round bar. The finished part

had the general contour of a bolt.

The R B & W Engineering Service developed the fact that we could make\*this part by the upsetting process in our bolt headers at a fraction of his cost to machine from the bar.

Do you use metal parts in large quantities that have the general outline of a bolt, and which you now mill from the



bar? Send us specimens, and let us investigate whether we can help you do a constructive job of cost cutting through the upsetting; or heading, principle by which we make bolts.

Much of our machinery is of our own exclusive design, and is adaptable to many operating short cuts by comparison with machining methods.

## RUSSELL, BURDSALL & WARD BOLT & NUT CO.

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21 Laura St., P. O. Box 1145  
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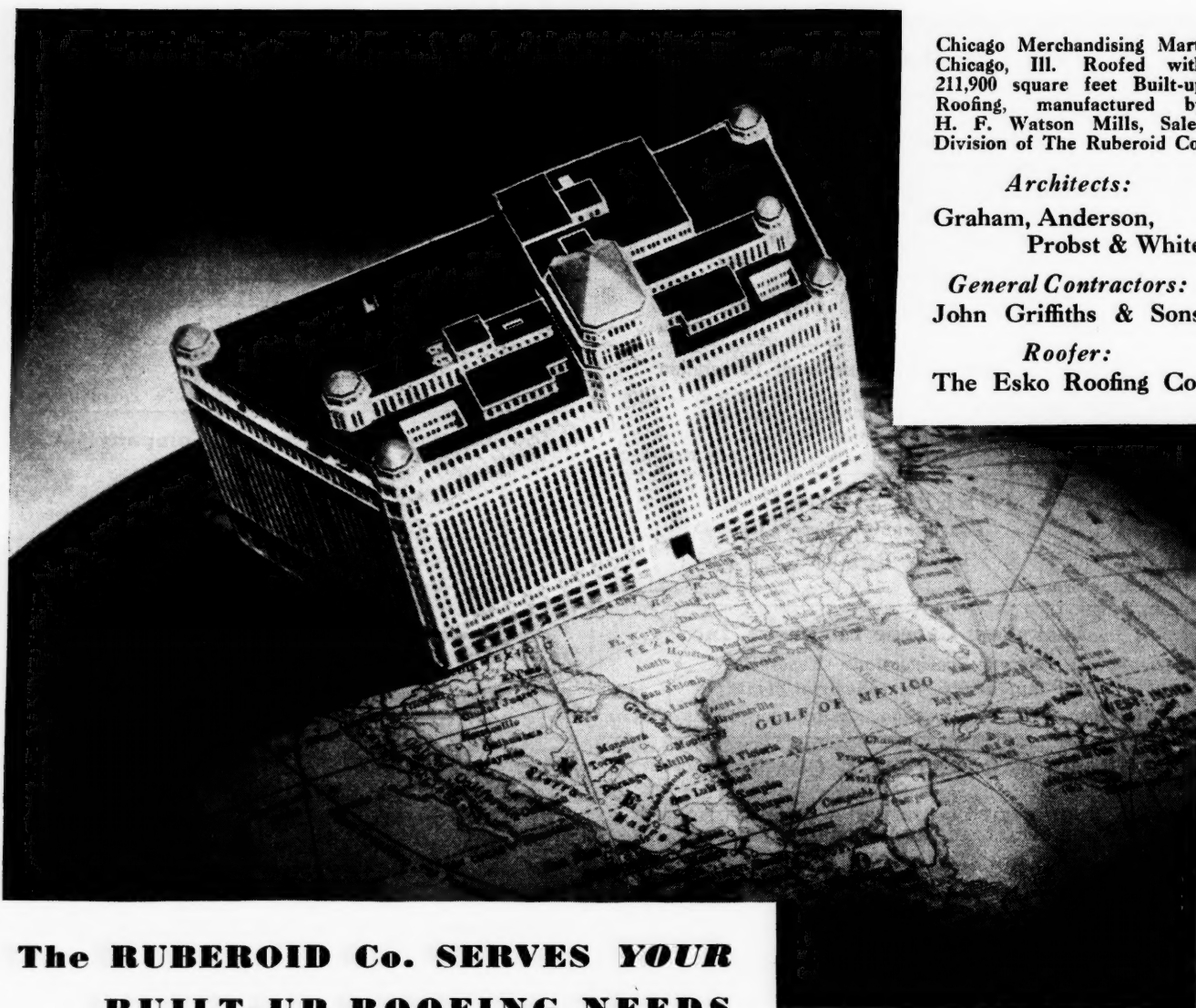
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Baltimore, Md., September 24, 1931

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## MANUFACTURERS RECORD

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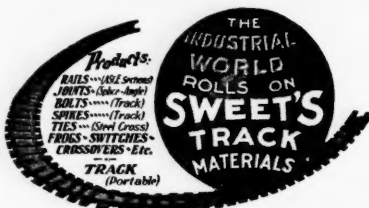
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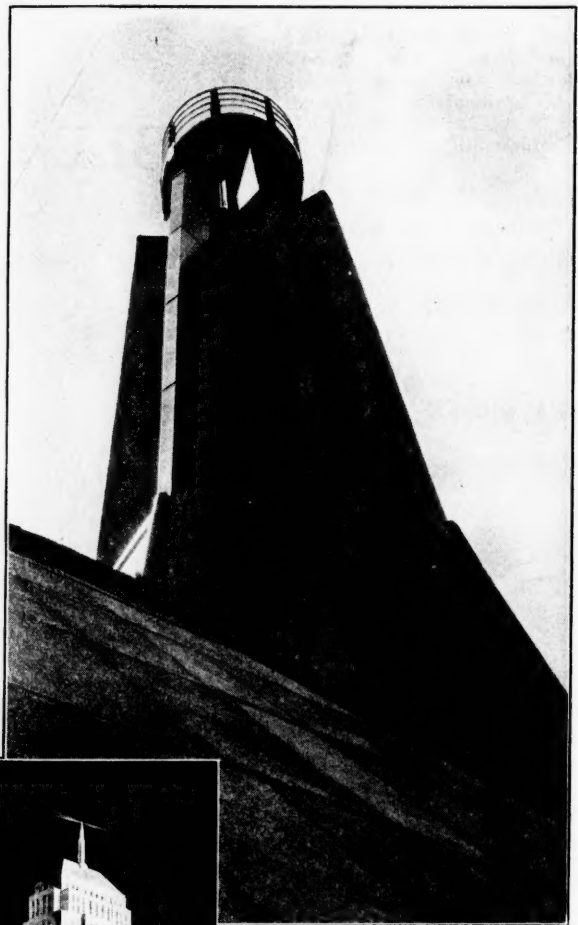
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of the South and Southwest as the Nation's Greatest Material Asset

Vol. C No. 13 }  
Weekly }

BALTIMORE, SEPTEMBER 24, 1931

{ Single Copies, 20 Cents.  
{ \$6.50 a Year

## Stabilization of Industry and Employment

**L**AST week, Gerard Swope, president of the General Electric Company addressed the National Electrical Manufacturers Association on "Stabilization of Industry." He declared to the 600 representatives of the 50 recognized divisions of the electric industries present that "industry must act to forestall legislation threatening the fundamental structure of American business." He pictured industry as shackled with the restrictions which prevent control of production, and labor as fettered by disadvantages commonly visualized in the forty-year dead-line.

Mr. Swope based his proposal on the fact that "industry must evolve and make effective measures which will first ameliorate, and ultimately eliminate, conditions confronting the country in the present situation when men able to work, who are competent workers and above all things desire to work, cannot find employment."

His plan contemplates first the stabilizing of production and consumption, and second the stabilizing of employment. He emphasizes that the plan is not new nor original; he brings together well considered proposals that have found support, including some that have been put into actual practice. The plan involves five basic principles which are enumerated as follows:

1—Regularity and continuity of employment through the stabilization of industry, with company-employe unemployment insurance as a reservoir of safety. 2—Leadership by organized industry to avoid the lack of uniformity and co-ordination inseparable from direction by the legislatures of the states. 3—Standardized forms of reports to stockholders to en-

able them as owners to be thoroughly and continuously informed as to the progress of their business. 4—Co-ordination of production and consumption on a broader and more intelligent basis for the particular benefit of wage earners. 5—Promotion of individual initiative and enterprise, and the protection of the public through Federal supervision.

Though no specific mention of anti-trust laws was made by Mr. Swope, he urged greater freedom of action on the part of industry to regulate production through trade associations by "the possible modification of some existing laws." Each industry is to establish a trade association to be under supervision of the Federal Trade Commission or a Bureau of the Department of Commerce, or some Federal supervisory body specially constituted.

These associations would "outline trade practices, business ethics, methods of standard accounting and cost practice; they would collect and distribute information on volume of business, inventories of merchandise on hand, standardization of products, stabilization of prices, and all matters which may arise from time to time relating to the growth and development of industry and commerce in order to promote stabilization of employment and give the best service to the public."

For the protection of their employes, the participating companies are urged to adopt employe plans providing for workmen's compensation, life and disability insurance, pensions, and unemployment insurance. Characteristic of these plans, and constituting an enlargement of the protective principle, is the absence of forfeiture of benefits, for it is expressly provided



that, should a worker transfer from one company to another, or from one branch of industry to another, he would carry with him all of his accumulated gains. To this extent the penalties engendered by advancing years would be eliminated. Mr. Swope does not discuss what happens if a man is discharged for cause.

The pension provision includes contributions by an employe to a minimum of one per cent of his earnings, and approximately equal contributions by the company. The unemployment insurance plan would involve equal contributions by the company and the employe, and payments in times of lay-off amounting to 50 per cent of average full-time earnings up to a maximum of \$20 per week. The principle of joint participation and joint administration by management and men in these several employe plans is to be followed.

In addition, a general board of administration would be formed by each trade association, this board to have nine members representing the trade association, the employes of the member companies, and the public. The general board of administration would constitute a body of overseers. Its duties, as laid down by the proposed plan, would be to interpret the various employe plans, supervise the individual boards of administration of the various companies, form and direct a pension trust for the custody, investment and distribution of pension funds, and in general direct all activities connected with the employe plans.

The plan throughout ignores the dole and all other devices suggestive either of a slavish working class or a paternalistic form of industrial rule. Its every provision respects the fundamental American doctrine of individualism, and outlines a sphere of liberty for industry and for the worker in which both may labor effectively and harmoniously for the national good.

Clarence L. Collens of Cleveland, president of the National Electrical Manufacturers Association, and of the Reliance Electrical and Engineering Company, presided at the dinner. The other speakers, who discussed the plan put forward by Mr. Swope, were: A. W. Robertson, chairman of the board of the Westinghouse Electric and Manufacturing Company; J. H. Trumbull, president of the Trumbull Electric Manufacturing Company of Plainville, Conn., and former Governor of Connecticut; Owen D. Young, chairman of the board of the General Electric Co.

When business men of such experience and prominence support a plan whereby provision is made for greater protection of employment and greater freedom of action on the part of industry, properly supervised, to allow it to stabilize production and thus stabilize employment, it warrants the most thoughtful and sympathetic consideration.

---

Competition cannot be beaten by giving in to it. The well-advertised line with a firmly established trade-mark is not subject to the whims of competition in the same degree as a line that is bought only because its price is low.—*Printers' Ink.*

## Revolt Against Extravagance

THE economic menace in state and local governmental extravagance is made conspicuous in a warning by the Memphis Mortgage Bankers Association that farm loans will not be granted in certain Mississippi counties unless a determined effort to reduce taxes shall be made by the appropriate authorities. This ultimatum may be interpreted as symptomatic of an incipient revolt against reckless state and local expenditures. It is by no means to be regarded as merely a movement by one specific organization and applicable to only a few counties in a single state. Nor is it to be considered as confined to farming as an individual industry. Pleas and protests by the taxpayers against extravagance have failed to move governmental officials; demands for practical economies have fallen on deaf ears. Direct action by financial sources from which the moneys flow may possibly prove more effective.

In the 15 years from 1913 to 1928, the latest available figures, the national income increased from \$34,400,000,000 to \$81,000,000,000, or 135 per cent. In the same period, the total amount of all governmental expenditures advanced from \$2,919,000,000 to \$12,609,000,000, or more than 300 per cent, the National Industrial Conference Board computes. The national wealth increased from \$189,000,000,000 to \$360,000,000,000, around 90 per cent, in the same decade and a half. Governmental expenditures have grown more than twice as fast as national income, and almost quadrupled the national wealth rate of increase.

As one result of such prodigal expenditures, lands are being forfeited in wholesale fashion in various states by property owners who cannot or will not pay their tax bills. Twenty-five per cent of Michigan real estate has reverted to the counties because of "the inability or disinclination" of property owners to pay high taxes, said former President Kissell of the National Association of Real Estate Boards. And, "if another 25 per cent be abandoned, which may happen, one half of the land in Michigan will be taxed to support the other half."

The Miami News finds "evidence aplenty that public concern over municipal operating expenses is not a condition peculiar to Miami," and adds: "Hundreds of cities are experiencing the same qualm. It is a trend of the times."

Reasonable expenditures for legitimate purposes demand only legitimate and reasonable taxes. The taxpayer's bill is an unfailing indication either of extravagance, or of businesslike administration.

The incorporated manufacturing, mercantile, commercial and amusement enterprises in the United States pay almost \$1,500,000,000 a year in taxes, of which amount over \$800,000,000 goes to state and local governments, chiefly in the form of property tax, says the National Industrial Conference Board.

The most recent survey of special insurance taxes places the figure at almost an even \$100,000,000 a year.

Public utility companies pay in taxes about \$188,000,000 a year, using for that purpose 9.7 cents out

of every dollar of consumer revenue and 19.6 cents out of every dollar of investor's income. In 25 years, the taxes for electric light and power companies have increased 7000 per cent, as compared with an increase of 650 per cent in their gross revenues.

Over 6 cents in every railroad dollar is paid out in taxes, and the total runs about \$400,000,000 a year.

Motorists pay \$515,000,000 a year in gasoline taxes, says Owen B. Augspurger of the New York Automobile Club.

Under the extravagances indicated by these few samples, a general and determined revolt may not occasion amazement.

The possibility of practical and practicable curtailment of expenditures in general cannot be successfully disputed. In Mississippi, to which the Memphis bankers' warning is directed, Tunica County is said by the Memphis Commercial Appeal to have cut the 1929 tax rate 20 per cent for 1930, and further reduction is contemplated. Tunica County taxes were \$500,391 in 1929 and \$353,557 in 1930, on the sale land, a difference of 29 per cent. By reducing large official salaries and limiting appropriations, Greenwood, Miss., last year saved \$38,097, and plans to save \$50,000 this year.

In Iowa, say the Memphis bankers, state expenditures have been reduced 20 per cent; county, city and school district budgets have been cut 15 per cent on the average, and the tax revenue for 1931 will be \$10,000,000 less than last year. Also, "Local boards in Iowa are almost competing with one another in promoting economies. No essential menace to state and community progress has resulted. On the other hand, administrative efficiency has been increased."

Whether the method adopted by the Memphis Mortgage Bankers Association to enforce tax reduction is practicable, or even advisable, appears to be open to question. The farmers in the counties affected find themselves between the devil and the deep sea. Unable to obtain money to finance their operations, they hardly can raise crops and pay taxes from the sale of those crops. In many cases, the lands may revert to the state and the extra tax burden be thrown on other shoulders, as in Michigan.

## A Timely Warning

THE Raleigh Times in commenting on a recent editorial in the MANUFACTURERS RECORD pointing out the advantages to industry of locating in the South because it can build and operate at about 60 per cent of the cost of similar plants in the North, says:

"The South does have the advantage of raw materials, of climate, of reasonable labor, of a marvelous developed power. But the South has also a short-sighted political element that thinks to shift the tax burden to such industry as may be attracted, to embarrass the greatest source and inducement to industry, the producers of

electric power, to impose a kind of industrial tariff bad enough in itself but rendered infinitely worse by the threat it carries. For industry that comes into the South these days does so with the risk of political persecution and exploitation attached."

The Raleigh Times is right in sounding this warning to the South, as the MANUFACTURERS RECORD has done in the past. However, the South is not the only section facing such a situation. Business and industry elsewhere have felt the effects of short-sighted political maneuvering in an attempt to shift the tax burden. As the South is a young and growing industrial region, it is all the more necessary that its legislative bodies exercise extreme care in passing laws or levying taxes that would tend to retard its growth, and especially should they be zealous in guarding the rights of existing industries against "political persecution and exploitation."

## Rockefeller's \$250,000,000 Radio City

A RECENT announcement by the Metropolitan Square Corporation, holding company for John D. Rockefeller, Jr.'s \$250,000,000 mid-town building project in New York, gives some striking facts as to the meaning of this great development in a time of business depression and uncertainty. It is computed that 10,000,000 days of eight hours each will be consumed by the workers who produce, transport and erect the material and equipment that will go into the ten great building units.

The total number of people employed directly or indirectly will be over 56,000. A small army of workers are wrecking and removing most of the 229 old buildings covering three city blocks. Following the wrecking crews come the excavators, steam shovel operators, rock drillers, powder men, truckmen and laborers. In the meantime, the "army of supply," which includes at various stages of the work approximately 46,000 men representing practically all trades, has been mobilized for action.

To supply the material for this gigantic undertaking will require the services of producers and laborers in many of the basic industries in several states. Among them will be miners of iron ore in Alabama and Michigan; copper from Arizona; coal from Pennsylvania and West Virginia. There will be lumberjacks and mill men at work in the great timber areas of the Southern States and the Northwest; workers in the marble quarries of Tennessee, and labor employed in blast furnaces, rolling mills and other manufacturing plants.

Included in the development are: The world's largest office building in floor area; two 45-story office buildings and one of 31 stories; the International Music Hall, biggest theater ever to be erected; a spacious sound motion picture theater; two 6-story buildings fronting on Fifth Avenue, and two other buildings, the size and use of which has not yet been announced.

# Automatic Stokers Increase Efficiency of Coal

**P**ROOF that bituminous coal is unusually efficient and economical when used with automatic stokers in domestic heating plants has been provided by the Norfolk and Western Railway. The carrier has just completed exhaustive tests of two representative stokers using the low and high volatile bituminous coals mined on the railway's line in Southern West Virginia, Southwestern Virginia and Eastern Kentucky. The tests were conducted in the carrier's modern laboratory at Roanoke, under supervision of its engineer of tests.

While the tests, as described in the following summary, were confined to two stokers which it is felt are fairly representative, there are probably other stokers which will give equally satisfactory results and tests will be continued with other makes.

Automatic stokers for firing domestic

heating plants is a development which has been making rapid strides. These stokers add to the convenience of heating homes and provide automatic facilities for using coal with that economy which usually is favorable to bituminous coal.

In order to approach a practical con-

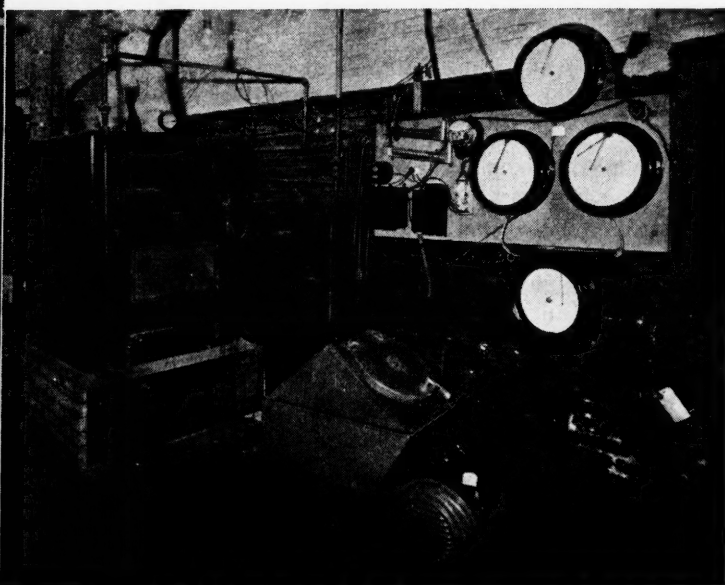
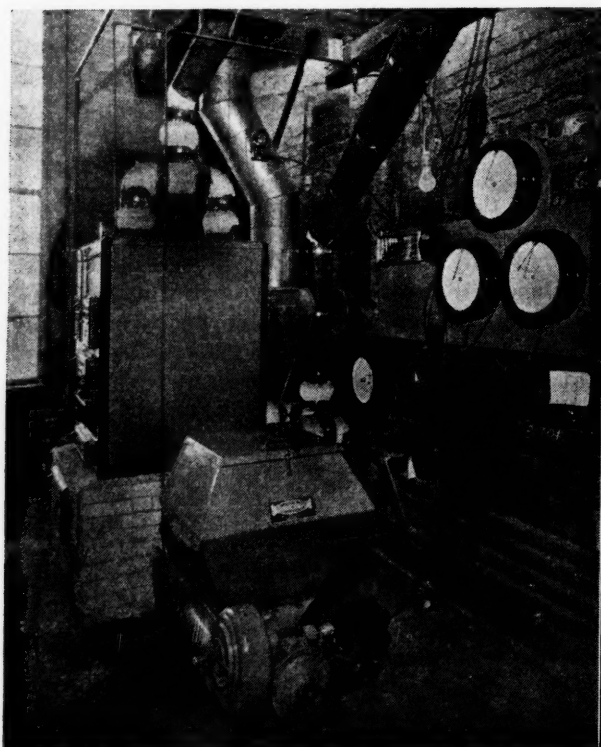
By

**HOLCOMBE PARKES**

Norfolk and Western Railway Company,  
Roanoke, Va.

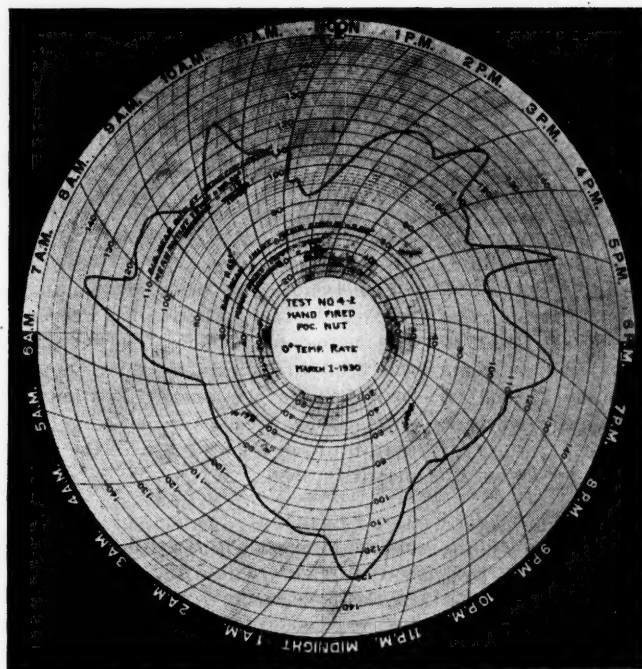
dition as nearly as possible, a certain residence was selected as the type of home where a stoker might be installed. This residence consists of 11 rooms and two large halls and one small hall. The radiating surface required was calculated, and the amount of radiation indicated that a boiler of 2600 square feet of rated capacity (water) would be proper for such an installation. Therefore a boiler of this size, having a grate area of 5.28 square feet, was purchased and installed in the testing plant. Suitable facilities for absorbing the heat, and instruments for determining and recording the results were applied.

Two representative types of stokers adaptable for burning bituminous coals in residential heating have been thoroughly tested, the De Luxe Model Iron Fireman, manufactured by the Iron Fireman Manufacturing Company, and the



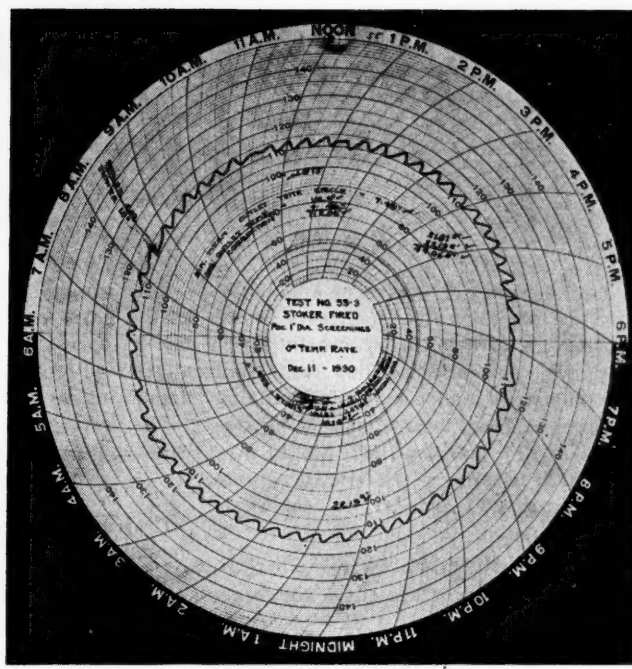
Types of Automatic Stoker  
Equipment Used in the Tests





Hand-Fired Record

Outlet water chart, showing temperature regulation while hand-firing the test boiler with Pocahontas nut coal at a firing rate corresponding to zero degrees outside temperature. The heavy, irregular line shows record of the temperature.



Automatic Stoker-Fired Record

Outlet water chart, showing temperature regulation while stoker-firing the test boiler with Pocahontas 1-inch diameter screenings at a firing rate corresponding to zero degrees outside temperature. The heavy line shows record of the temperature.

Furnastoker, manufactured by Combustioneer, Incorporated.

Three rates of firing were established: A rate required to heat the residence to 70 degrees at an outside temperature of approximately zero, and with  $1\frac{1}{2}$  changes of air per hour, with a 15 mile per hour wind; a rate of firing to meet the above conditions except at an outside temperature of 35 degrees; and a rate to meet the same conditions at an outside temperature of 65 degrees. Tests were also made to correspond to varying degrees of outside temperatures within the foregoing limits. Most of the tests consisted of a continuous operation for 96 hours although some were extended to 167 hours.

Coal consumption required to meet the outside zero temperature was 15 to 19 pounds per hour. Consumption required to meet the outside temperature of 65 degrees was just as small an amount of coal as necessary to keep the fire alive and this averaged about two pounds per hour.

#### SIZE OF LOW VOLATILE COALS TESTED

Nut coal .....	1 inch to $\frac{1}{2}$ inch
Pea coal .....	$\frac{1}{2}$ inch to $\frac{1}{4}$ inch
Slack coal .....	1 inch to 0

The volatile in these coals varied from 15.78 to 22.02 per cent. The tests clearly indicated that these low volatile coals, as mined in the Pocahontas and Tug River fields, can be very satisfactorily used in these stokers. The over-all efficiency of each coal was good and in each case exceeded the efficiency obtained with closely supervised hand-fired methods. Average efficiency of the three

grades was practically the same. Efficiency at the high rate of firing, corresponding to an outside temperature of zero, was greater than at the medium rate of firing for intermediate outside temperatures and still greater than the efficiency at a very low rate of firing corresponding to mild outside temperatures.

#### HIGH VOLATILE COALS TESTED

Winifrede 1 inch stoker, 1 inch to 0
Pond Creek 1 inch stoker, 1 inch to 0
Thacker $1\frac{1}{2}$ inch stoker, $1\frac{1}{2}$ inch to 0

Volatile matter in these coals varied from 28.68 to 36.82 per cent. All gave satisfactory results and the tests clearly indicated that high volatile coals of the character shown can be used efficiently in these stokers.

Each coal showed practically the same over-all efficiency. In all cases this efficiency was greater under stoker firing than under closely supervised hand-firing but the efficiency of the fuel was highest at the high rate of firing, corresponding to a cold outside temperature.

To keep the fire in good condition it was found desirable to remove the accumulated ash, mostly in clinker form, at intervals corresponding to the burning of each 500 pounds of coal. In practice this meant the removal of ash once a day during zero weather conditions and once every two or three days during milder weather. No other attention was found necessary after the proper air, thermostatic and time controls were once regulated to meet the characteristics of the coal being used.

Results of these tests have been in-

corporated in a booklet which is being distributed by the Coal Traffic Department of the Norfolk and Western Railway.

### \$890,000 Foundation Bid

Washington, D. C.—Low bid for excavation and the construction of foundations for the \$10,000,000 building to be erected here for the Department of Justice was submitted to the Treasury Department, Jas. A. Wetmore, Acting Supervising Architect, by the MacArthur Concrete Pile Corporation, New York, at \$890,700. Compressed concrete pedestal piles will be used. Zantzinger, Borie & Medary, Philadelphia, Pa., are the architects for the building and Isaac Hathaway Francis, also of Philadelphia, is engineer for heating, plumbing and wiring. Gravell & Duncan Lewis, Washington, are the structural engineers.

### Veterans Hospital Bids

Oteen, N. C.—The Veterans Administration, Washington, opens bids October 20 for the construction here of Veterans Hospital buildings and utilities, including roads, walks, walls, grading and drainage, clearing site and excavation. Separate bids will be received on general construction and electric elevators. Drawings and specifications may be obtained from the Construction Service, Veterans Administration.

# Signs of Better Business

THE AUSTIN Co., engineers and builders, last week received contracts representing an investment of nearly \$400,000. "We now have pending more than 250 industrial and commercial building projects, aggregating \$40,000,000," states W. J. Austin, president. Mr. Austin says that with building costs now the lowest in 16 years, and 20 to 30 per cent below the average of the last ten years, "a definite upturn in the building industry is near at hand."

COTTON GOODS shipments during August were 108.9 per cent of production, reports the Association of Cotton Textile Merchants, New York. In comment on the report, Harry Riemer writes in the Daily News-Record: "This is in line with information and reports coming to hand repeatedly, urgent need of merchandise, constant demands for anticipation of goods on orders and persistent efforts for immediate shipment."

LUMBER ORDERS for several recent weeks have been running ahead of production, states the National Lumber Manufacturers Association.

UNDERWOOD-ELLIOTT-FISHER Co. reopened last week, restoring employment to approximately 2700 workers idle during the summer shut-down.

ARMSTRONG CORK CO. AND THE CONGOL-EUM-NAIRN Co. have purchased a site in California where it is reported two large linoleum products factories are to be erected at an estimated cost of \$4,000,000.

THE LENOIR CAR WORKS, Lenoir City, Tenn., has resumed operations after being closed for several weeks, when extensive repairs were made to equipment. Resumption of operations provides work for about 100 men.

BRISTOL DOOR & LUMBER Co., Bristol, Va., will resume operations shortly of its sawmill department; timbering operations necessary for the log supply will give additional employment.

THE FLORIDA PORTLAND CEMENT Co., Tampa, which shut down some time ago for repairs and general overhauling of machinery, will resume operations.

SHIP CONSTRUCTION will be increased, as the naval construction program costing in excess of \$200,000,000 is to be augmented by recent award of contracts amounting to approximately \$50,000,000 for 11 destroyers. It is hoped that work can begin early in October.

CORPORATION EARNINGS in the second quarter of 1931, for 260 industrial concerns, were 28.7 per cent higher than for the first quarter of the year, say Ernst and Ernst, nationally known accountants and auditors. In recent years the increase of second-quarter over first-quarter earnings has averaged around 20 per cent.

LOUISVILLE VARNISH Co., INC., increased sales during August compared with the previous month and with August, 1930. President P. H. Callahan writes: "We have excellent reports from our salesmen in all parts of the country as to better prospects."

THE STEEL INDUSTRY has passed its low point in the belief of the American Institute of Steel Construction, Inc. "There is now much activity in the ranks of management and that activity is on the constructive side, building for a greater future," it says.

THE CUTTER MFG. Co., Rock Hill, S. C., has begun full-time day schedule of operations, providing employment for about 250 persons.

THE BOARD OF TRANSPORTATION of New York City will award contracts next month for subway cars to cost upwards of \$60,000,000. Builders say the award will involve the largest dollar volume inquiry before car builders in years.

THE BATESVILLE MARBLE QUARRIES, Batesville, Ark., received an order through their New York distributor for about 60 carloads of stone to be used on the exterior of a \$3,000,000 courthouse at Hackensack, N. J.

SALEM-STEEL Co., Winston-Salem, N. C., was awarded several contracts for structural steel for projects in different parts of the state.

LIFE INSURANCE written during August reached the highest total since February. The aggregate amount of new business was \$839,451,000. While this is 9.6 per cent below the amount written for August 1930, it compares with the 17 per cent drop in July against the same month in 1930.

THE SHIPPERS ADVISORY BOARD has received reports indicating that shippers in the Southeastern territory expect a net volume of business in basic industries in the third quarter of this year approximating that in the like period of 1930. Producers of brick, clay, lumber and forest products anticipate an aggregate movement of these commodities equalling the 1930 movement, while manufacturers of pulp look for an increase of 10 per cent. Several of the larger iron and steel concerns predict car requirements slightly better than the actual loadings last year. The textile industry contemplates improved demand within the next three months, with sales increases in most lines already noted.

INDIAN HEAD COTTON MILLS, Cordova, Ala., have resumed operations after a shut-down of several weeks, providing work for 300 men and women. Additional employees may be added.

THE WILLIAMS-NORRIS FURNITURE Co., High Point, N. C., John I. Norris, vice president and production manager, will shortly begin operations, employing 200 persons. The new unit will be devoted to manufacture of dining and bedroom suites. Orders already in hand assure capacity operation until the first of the year.

THE HUNTINGTON TUMBLER Co., Huntington, W. Va., has recalled 125 men to work, and indications are the plant will be able to operate continuously until next June, producing hand-blown glass tableware. "Buyers appear to be more actively interested," declared C. W. Kerr, manager.

THE STANOLIND PIPE LINE Co. has placed an order for 35,000 tons of steel pipe with the A. O. Smith Corp., the Youngstown Sheet & Tube Co., Republic Steel Corp., Spang, Chalfant & Co., Inc., and the National Tube Co.



# Shreveport Provides Increased Water Supply

THE recently completed water works pumping and filtration plant located on the shore of Cross Lake in Louisiana provides the city of Shreveport with an increased supply of potable water and represents a cost of \$500,000. This plant while designed for 8,000,000 gallons daily capacity can be readily enlarged, pipe of sufficient size having been installed to accommodate at least three more units similar to the initial installation, before it becomes necessary to add to the collecting system above the plant. A 48-inch intake is able to insure a flow of upwards of 30,000,000 gallons of raw water daily from the lake to the concrete receiving well which is located directly under the basement or low surface pump floor of the pump house. Available low surface pump space can accommodate five 8,000,000-gallons-per-day electrically driven centrifugal pumps, although at present there are two pumps only, of 8,000,000 gallons and 4,000,000 gallons capacity.

These two high surface pumps are installed on a reinforced concrete floor 10 feet above the low surface pump level. Space has been left for two additional 8,000,000-gallon pumps and control panels for these units. The high surface pump floor occupies about two-thirds of the room area, leaving an opening directly over the low surface pumps. At one end of the mezzanine

floor is a well lighted and ventilated chlorine room, and at the other end the electric control apparatus is placed. An electric traveling crane of 10 tons capacity operates above the entire space, for handling machinery.

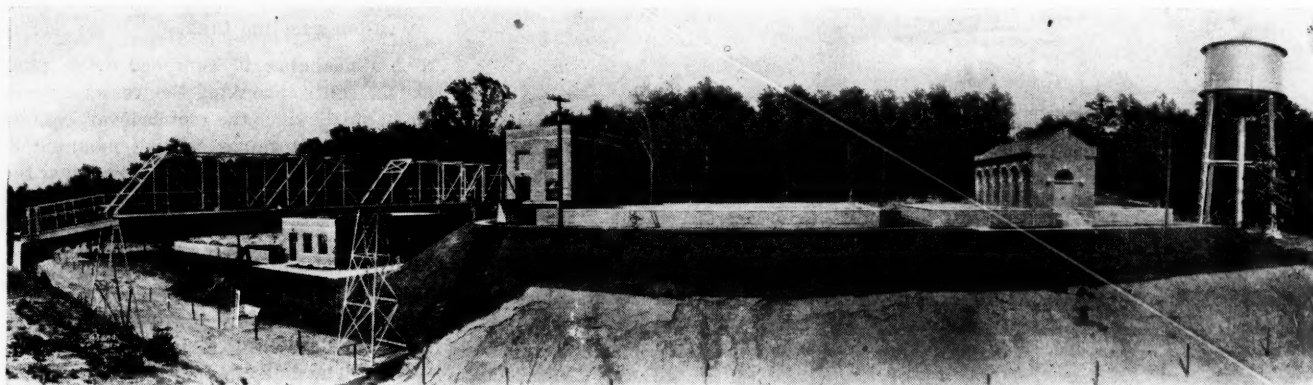
In designing the plant the engineers made low first cost secondary to compactness, efficiency and attractiveness, and with this in mind they took advantage of the physical condition of the site. The topography of the ground is rolling, with a ravine so located as to accommodate that part of the plant which requires low level or excavation. Large oak trees, with an occasional pine, form the background. The front is terraced and sodded with Bermuda grass. The building frontage extends about 500 feet, beginning with the 1,000,000-gallon clear water storage basin near which is a spray of finished water from some 60 operator heads liberating the carbon dioxide. Adjacent to and made a part of the storage basin wall is the main pumping station, about 24 feet high, constructed of brick and concrete, surfaced on the outside with vari-colored clinker brick and trimmed in Indiana limestone. The entire outside surface of the storage basin pumping house, the coagulant house, the settling basin and filtration house is veneered with the same kind of brick, thus concealing the concrete walls.

Interior of the pump house is faced with a buff brick, special shapes being used for columns, pilasters, door and window trim. From mezzanine floor level the walls are veneered with tile to harmonize with the brick. Windows on all four sides provide an abundance of natural light.

To the right of the pump station, the substructure of the concrete mixing chamber is hidden behind a high terrace, and above this stands the coagulant building. This structure has space for two cars of chemicals, three dry feed machines and agitator equipment. An electric elevator conveys chemicals from one level to another. A 160-foot steel bridge, for transferring chemicals from railroad cars to the building, spans the railroad embankment. Adjacent are the coagulant house and the settling basins in two units, rising about four feet above the ground level.

Between settling basins and filter, which are not covered, is a 10-foot alleyway accommodating much of the pipe work, but which is now filled to conform to the general scheme of landscaping.

The filter house is a long rectangular building with arched windows forming a colonnade. It is finished on the inside with face brick and tile, as is the pump house. To add to the appearance this building has a pitched roof with Spanish tile. Underneath the structure is a spa-



General View of \$500,000 Water Works Plant and Filtration Unit for Shreveport, La.



cious pipe gallery; the piping and all other features have been so designed that they can be added to without necessitating any changes to the structure. Terrazzo floors have been laid in all buildings. Special consideration was given to electric wiring and lighting layout. The filter operating tables are of black and gray marble, trimmed in chrome-nickel. Construction was carried out with a view to holding upkeep costs to a minimum.

On the extreme right of the plant is a 100,000-gallon water tank, aluminum painted.

Design and construction were supervised by the J. N. Chester Engineers, Pittsburgh, Pa. Work was carried out

under the supervision of Thomas L. Amis, for many years superintendent of the water department of the city of Shreveport. The project was constructed by K. C. Wilson, Shreveport builder. The following subcontractors were engaged:

**Pumps**—American Well Works, Aurora, Ill.  
**Filter Equipment**—E. W. Bacharach & Co., Kansas City, Mo.

**Wash Water Tanks**—Chicago Bridge & Iron Works, Dallas, Texas, and Chicago, Ill.

**Reinforcing Steel**—Laclede Steel Co., St. Louis, Mo.

**Concrete Intake Line and Concrete Wash Water Sewer, 20-inch High Surface Line to City**—J. B. McCrary Co., Atlanta, Ga.

**Pipe and Fittings**—National Cast Iron Pipe Co., Birmingham, Ala.

**Structural and Miscellaneous Iron**—North Texas Iron & Steel Co., Fort Worth, Texas

**Plumbing and Heating**—Fitzgerald Plumbing & Heating Co., Shreveport, La.

**Electric Power and Light Work**—Jack Moorman, Shreveport, La.

**Roof and Sheet Metal Work**—Rankin Sheet Metal Works, Shreveport, La.

**Traveling Crane**—Roeper Crane & Hoist Works, Reading, Pa.

**Paint**—J. V. Schexnaldre, Shreveport, La.

**Terrazzo Floors**—International Tile Co., Houston, Texas

**Millwork**—Victoria Lumber Co., Shreveport, La.

**Metal Windows and Operators**—David Lupton Sons Co., Philadelphia, Pa.

**Elevator**—Hunter-Hayes Co., Dallas, Texas.

S. T. Hyman, Baltimore, writes to ask the names of makers of peanut cleaning and shelling machinery and says, "I see no such advertisements in the MANUFACTURERS RECORD."

## All-Welded Ferryboat

A rivetless ferryboat, constructed entirely by welding and built under the supervision of the American Bureau of Shipping, and subsequently receiving its full approval, was completed at the plant of the Charleston Dry Dock & Machine Co., Charleston, S. C., and delivered to the owners, the Seaboard Air Line Railway at Savannah, a few weeks ago. This boat, the Island Girl, was designed for construction by the Charleston company after plans and specifications by the R. F. Smith All Welded System, patent rights of which are held by the company. It was completed just 15

months after the launching of the Carolinian at the same plant, said to be the first rivetless ship ever constructed.

The Island Girl is 64½ feet long, 22 feet wide and 8 feet deep at the center, 10 feet deep at the bow and 9½ feet at the stern. Load draft is 4 feet forward and 5 feet 9 inches aft. The hull is constructed of ¼-inch plates with 18-inch web frames spaced 8 feet apart and with 6-inch longitudinals spaced 24 inches apart. There are five watertight bulkheads with a fuel cofferdam having a capacity of 2000 gallons. Actual construction of the boat was completed in 90 days. It has a hull with very smooth

lines, and is designed to carry safely 175 passengers.

The ship is powered by a 125-148 horsepower Fairbanks-Morse marine Diesel engine with clutch and reverse gear. The engine is equipped with a water cooled exhaust manifold, built-in air compressor, cooling water pump, cooling water thermostat and by-pass piping, lubricating oil pump, fuel and lubricating oil filter, forced feed lubricator. It has a Columbian bronze propeller, with a diameter of 45 inches, pitch of 32 inches and a developed area of 789 square inches. The propeller shaft is of American Bureau test steel, 3½ inches in diameter with bronze sleeves.

The vessel is equipped with a Fairbanks-Morse 750-watt electric plant and a set of 65 ampere-hour batteries. This plant is also belted to a type E Fairbanks-Morse air compressor. A Dayton-Dowd fire pump, capable of handling 500 g. p. m. against a 100-pound pressure, is a part of the equipment. The pump is driven by a 6-cylinder 60 horsepower Red Seal Continental engine, supplied by a 20-gallon gasoline tank.

Main engine is equipped with pilot house control, making the vessel a "one-man ship," since the clutch lever, control pedestal and gauges are all mounted in the pilot house. Two men act as the crew, one in the pilot house and a second on deck.

The trials of the Island Girl were run over a mile course and speed averaged 9.4 miles an hour, the builders report. Contract called for a speed of 8 miles an hour. The delivery trip from Charleston to Savannah was made at a total fuel cost of approximately \$5.25.



Powered by Fairbanks-Morse Marine Diesel Engine

# A Progressive Georgia Community

By  
GEORGE GARNER

TO say that "there are six large factories, which run every working day in the year, employing large numbers of men and women," is no mean boast for a town of 3600 population, especially in a period when industry throughout the land is engaged largely in twiddling its thumbs. But Winder, in Georgia, seems to regard its industrial activity as a matter of course, rather than out of the ordinary.

So it is that the people of Winder and its area continue to draw their pay envelope of about \$1,200,000 a year, or \$100,000 a month, with almost unflinching regularity. Peace and prosperity prevail, based on steady work, in healthful surroundings, with ample opportunity for rejuvenating recreation.

Also, the cheer from Winder spreads largely through Barrow county, of which it is the seat, and its prosperity is shared by the 14,000 residents of that area. Because of the market advantages of Winder a manufacturer of trousers was established at Statham, six miles away. The entire output of this concern is by contract to distributors and jobbers who have trousers made under their own brand.

But Winder is looking beyond the present and is peering diligently into the future. First, Winder finds an abundance of raw materials, and a wealth of timber in its region near the foothills of the Blue Ridge mountains. Wood is at hand for furniture, chests and boxes, for crates and handle factories, for caskets and various kinds of implements and tools. The workers are drawn mainly from small farms and are intelligent and industrious, and so the various industries flourish. Incidentally, it is interesting to note that the owners and operators of Winder's factories in the main are young men, with marked talent for business, who attract to their concerns enterprising and ambitious men and women and build up a fine composite personnel.

As some communities are celebrated for specific products, so Winder is widely known for its overalls and other garments, in the manufacture of which it takes particular pride. The use of high grade materials and the quality of the finish assure service. Well financed and run on business lines, the firms are able

to make prices, for large or small quantities, which help to promote a widespread and regular sale.

Agriculture and the factory plant are brought together in close bond by an abundance of fruits of the field, and opportunities for canning and other preserving plants. Fruits and vegetables flourish, and workers are at hand to transform the raw material into canned goods of the highest quality.

The minerals of the area are principally mica, clays and granite, and attractive opportunities for development in those fields are reported.

For the distribution of its products, Winder has the Atlantic and Norfolk mainline of the Seaboard Air Line, placing it in close touch with Richmond, Washington, Baltimore, Philadelphia and New York, while the Gainesville Midland, between Gainesville and Monroe, connects with the Washington-Atlanta mainline of the Southern Railroad. Over these lines, goods also travel to foreign lands, through Norfolk, Savannah, New Orleans, Mobile and other Southern ports. Ample switching and storing facilities are provided at Winder, and sites are available for expansion of such facilities.

Automobile traffic of every kind finds good roads in all directions. The people of Winder and visitors may travel north or south, east or west on fine highways; route No. 8 being part of the Bankhead highway from Washington to Los Angeles, and No. 11 the Asheville and Miami stretch. The town is 48 miles from Atlanta, 120 miles from Chattanooga and 27 miles from Gainesville.

For water, it draws on a stream about a mile distant, through a highly modern plant, and the supply is described as of high purity and much more than adequate volume for the present and a far future. Hydro-electric power for the

town and county is furnished by the Georgia Power Company, and consumers seem satisfied with the rates. Steam coal is obtained from mines in Alabama, West Virginia, Kentucky and Tennessee.

The people of Winder rejoice in its climate, which is mild and even, and favorable for industrial operations as well as inspiring to health. Plenty of rain-fall is reported, the vital statistics are most favorable, and labor loses little time on account of weather conditions or sickness. The town is surrounded by small farms and truck farms, and the cost of living is correspondingly low.

In its social, religious and educational phases of life, Winder is equally happy. Churches, schools and other facilities flourish, and a clubhouse for the Women's Club is now in course of erection.

## \$1,032,000 Federal Building Bid

Miami, Fla.—Ralph Sollitt & Sons Construction Co., Chicago, submitted low bid at \$1,032,472, to the Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, for the construction of the new Federal building here to house the post office, courthouse, customs house, etc., the bid being based on the use of limestone for the exterior. The same firm submitted low bid at \$1,093,732, based on the use of Floridene marble for the exterior. The S. Heller Elevator Co., Milwaukee, Wis., submitted low bid at \$40,590, for elevators. Phineas E. Paist & Harold D. Stewart are the architects and L. Murry Dixon, associate architect, all of Miami and Coral Gables; Maurice H. Connell is the mechanical engineer and Harvey Baxter, structural engineer, both of Miami.

## \$500,000 for Residences

San Antonio, Tex.—Plans for a residential construction program in the Olmos section of San Antonio to cost about \$500,000 have been announced by H. C. Thorman, San Antonio real estate developer. The project will involve the construction of 40 dwellings to cost from \$7500 to \$15,000 each, and work on the first group is expected to begin at once.

# Gold Hoarding and World Depression

## The Functions of Money

(Number 2)

By GEORGE W. ARMSTRONG, Fort Worth, Tex.

**REDUCTION IN VOLUME OF MONEY REDUCES DEMAND.**—We all understand that values are made by supply and demand. We understand supply because it is visible, but the invisible power called "demand" is not so well understood. It is man with money or credit. Man with all of his needs and wants and vanities and extravagances without money is not demand.

The millions of unemployed and the farmer without money, constituting with their families approximately one-half our population, materially reduce the demand for all of our products. Their buying and consuming and wealth producing power can only be restored by a restoration of money and credit. Obviously such restoration, even without foreign markets, would be a long step in the direction of restoring prosperity, or inflation.

**FOREIGN DEMAND DESTROYED BY GOLD STANDARD.**—The foreigner's buying power has been destroyed in precisely the same manner. Our international bankers and economists and Federal Reserve management have induced them to return to the gold standard and have loaned them the gold for that purpose, which they have had to repay. Now they are unable to maintain sufficient gold as a cover for their bank notes, and they cannot extend credit to their domestic industries or use this borrowed gold to pay for our goods, and they must borrow more.

First Germany called for help, and then Great Britain, but neither of them can maintain the gold standard indefinitely upon borrowed gold. The gold standard has already bankrupted the people of Germany and Great Britain, and the borrowing of gold will soon bankrupt their governments.

Money is also the medium of exchange

of one commodity for another, and gold is now the accepted standard for international exchange. There is no reason for abandoning the gold standard for international or even domestic use if it is freed from hoarding and manipulation, otherwise it should be abandoned. It will not do to artificially confine the activities and the industries and the consuming power of men to a limited and a shrinking volume of hoarded gold. We must either expand or abandon the use of gold as money.

**MONEY IS THE YARD-STICK OF VALUE.**—Money has been called the yard-stick of value. Strictly speaking, values are expanded or contracted by the expansion and contraction of credit. But credit rests upon the volume of money in circulation. The banks with plenty of money in their vaults are always looking for loans, but not otherwise.

John Stuart Mill says, in his "Principles of Political Economy":

"That an increase in the quantity of money raises prices, and a diminution lowers them, is the most elementary proposition in the theory of currency, and without it we should have no key to the others. \* \* \*

"If the whole money in circulation was doubled, prices would be doubled. If it was only increased one-fourth, prices would rise one-fourth. There would be one-fourth more money, all of which would be used to purchase goods of some description." \* \* \*

**DEPRESSION DUE TO INADEQUATE SUPPLY OF MONEY AND CREDIT.**—This law of money is accepted as true by Adam Smith, David Ricardo, and all other political economists. The truth of it has been thoroughly demonstrated by the recent experiences of practically all European countries as well as our own. This depression is the direct and proximate result of an inadequate supply of

both money and credit, and it will not be lifted until they are restored.

According to the report of the Secretary of the Treasury for 1930, there was a contraction of money in circulation during the 12 months between June 30, 1920 and 1921 of about \$4 per capita. There was about the same contraction in the 12 months between June 30, 1930 and 1931, which represented about one-third of the money then in actual circulation. But the contraction in credit in both of these periods was very much greater, with a consequent and inevitable crash in values.

Our structure of credit and values has been illustrated by an inverted pyramid resting upon its apex. The apex is the volume of money in circulation; upon money rests credit of much larger proportions, and upon credit rests all values of still larger proportions. Reduce the size of the base and the superstructure must be reduced correspondingly.

## \$2,000,000 MUSIC CONSERVATORY

### Rollins College Interests Promoting Important Project

Winter Park, Fla.—Dr. Hamilton Holt, president of Rollins College, and Dr. Clarence Nice, director of the Conservatory of Music affiliated with the institution, are promoting plans for a costly conservatory. Buildings will be of Mediterranean architecture connected by loggias. The front will open into a foyer extending to a patio with fountains and an Italian garden, and back of the garden there will be a concert hall to seat 300 at private recitals. On the second floor there will be a dance studio, and beyond this the main building will open off an open air amphitheatre, with a seating capacity of 1500 and overlooking the lake.

There will be a battery of 18 teaching studios, 3 stories high, 48 practice studios, and 8 masters' studios. Dormitories for girls will be provided, two girls to occupy a suite consisting of a living room equipped with a piano, dressing room, bath and sleeping porch. Dormitories for men will occupy the opposite side of the campus. An organ building will house 7 organs, and space will be provided for 30 grand pianos and 86 uprights. Other facilities will include a recreational center for the faculty and students, a club with swimming pool, and a radio broadcasting plant. Plans contemplate an expenditure of \$1,000,000 for buildings and equipment and \$1,000,000 endowment. Kiehnel & Elliott, Miami, Fla., are the architects.



# 42-Mile Road Built in Record Time

**I**N building in six months' time a 42-mile section of the Coastal Highway, reaching from Canada to Key West, the Hardaway Contracting Co., Columbus, Ga., established an unusual record for the laying of concrete pavement. Construction of the 18-foot highway began in January and was completed in July. Despite difficulties encountered, a maximum output of 3012 lineal feet, representing 6024 square yards of pavement, was recorded on May 28, 1931; this is at the rate of 15 miles of 18-foot roadway monthly, whereas the monthly average of such construction ordinarily is about seven miles. To make this record possible the company mapped out a program for expediting delivery of materials to various points along the route. Material barges were loaded at Charleston, S. C., then floated to strategic points along the right of way.

The road passes through a picturesque country, and is nearly always within sight of water. It runs from historic Georgetown on the Santee River to the end of the Cooper River bridge at Charleston. The link is on one of the most traveled routes used by long-distance motor tourists and its completion

will mean a saving in time and in wear and tear on motor vehicles.

The job was under supervision of S. S. Scott of the Hardaway firm and was carried out under direction of C. H. Moorefield, State Highway Engineer. Contract was let in 1930 but construction did not get under way until early this year. The project involved a total of approximately \$1,150,000.

The Hardaway Contracting Co., established in 1901 by B. H. Hardaway, Sr., during the past 30 years has made a reputation for itself in the building of dams, power plants, highways and bridges in the Southeast, and is now widely known as one of the foremost contracting firms of the South. The company's activities in the highway industry have been confined principally to the past 10 years of its existence.

Personnel of the organization in-



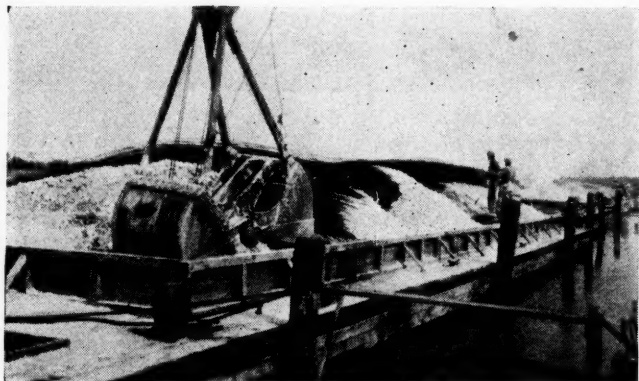
Finishing the Roadway Surface



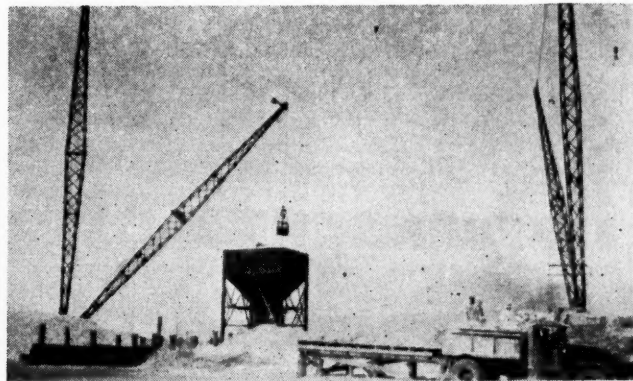
Concrete Mixer and Power Finishing Machine



Dumping Direct Into Mixer Hopper



Delivery of Materials to Points Along the Right-of-Way Was Facilitated by the Use of Barges



Cranes and Bins Played Important Roles in Speeding Delivery of Materials to the Mixers

cludes: B. H. Hardaway, Jr., president; A. F. Truett, Jr., secretary and office manager; S. S. Scott, vice-president, and R. E. Hardaway, Jr., vice-president. A two-mile bridge over the Tennessee River at Huntsville for the Alabama Bridge Corporation—comprising a steel through-span bridge with a continuous span of

766 feet, making up three spans, and four other spans of 200 feet each with necessary approaches—was recently completed by the Hardaway company under supervision of R. E. Hardaway, Jr. F. C. Ray, a graduate of the University of North Carolina, is office man, and maintains contact with the company's field men.

### \$2,000,000 Harris County Bonds

Houston, Tex.—Harris County Commissioners Court authorized the sale October 1 of \$2,000,000 road bonds. Bidders will be requested to set the rate of interest, according to County Auditor H. L. Washburn.

## Luxurious Cars for Interurban Service

**T**HIRTY-FIVE new electric rail coaches are now in service on the Indiana Railroad System, of Indianapolis, running between Louisville, Ky., and Indianapolis, or Indianapolis and Fort Wayne. On August 23 new and faster operating schedules were adopted decreasing the running time from Indianapolis and both terminals to about three hours.

The new cars represent an investment of \$980,000 and embody all that is new in the electric transportation field, based on careful research under actual operating conditions. Specially-designed motors make these de luxe cars capable of speeds exceeding 70 miles an hour. A stream-lined exterior with rounded contours reduces wind resistance and adds to the speed. The cars are able to accelerate rapidly, reaching full speed very quickly after a stop. A new type air brake with double shoes claspings both sides of each wheel is used, also each car has a set of electro-magnetic brakes.

The cars are designed with a very low center of gravity. Main body of the car is built of aluminum alloys of high tensile strength. Specially constructed trucks, which support the high-speed mo-

tors close to the ground, are designed to eliminate much of the side sway. If for any reason the motorman's hand on the controller releases its tension, the current is immediately shut off and the brakes are applied automatically.

Fourteen cars are equipped with a special observation-lounge compartment in the rear third of the car space. Thick carpeting covers the floor. A number of

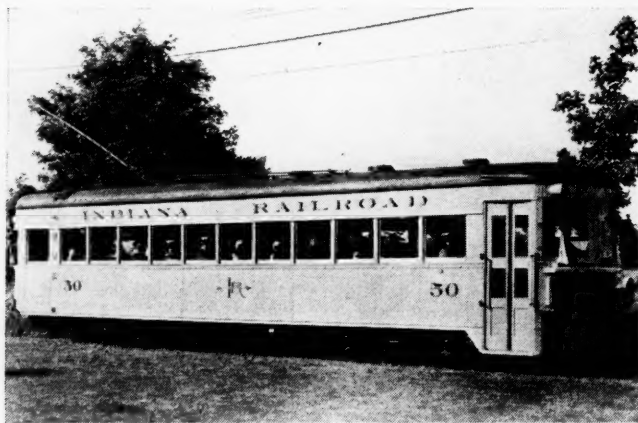
tables support reading lamps and provide space for reading matter and small parcels. Deeply upholstered chairs and a pair of tapestry divans complete the furnishings in the compartment.

In the coach compartments of both the observation-lounge and standard cars are individual seats of air-cushioned leather, and car windows are higher and wider than normally used. Ventilators insure a constant supply of fresh air and, in summer, electric fans furnish cool breezes. In winter, the cars are heated by electricity, and air-tight steel frames overlaid by storm windows protect against cold air. Special apparatus on each car provides for lighting the cars independently of the trolley, so that the volume of light does not fluctuate with the trolley current.

The new cars are 8 feet 9 inches wide and 46 feet long, with two 4-wheel trucks. They weigh 25 tons. Passenger capacity of the observation-lounge compartments is 10, and of the coach compartment in the same type cars, 28. Passenger capacity of the standard type is 40. The cars were built by the Pullman Car & Manufacturing Corporation, and the American Car & Foundry Co.



Interior of the Coach



One of the New Cars



The Observation-Lounge Compartment

# Tractor Lowers Crop Costs

**T**HE operation of nearly 1,000,000 tractors on American farms has impelled a study of types of farm power, and a compilation of operating figures and other data. The farm price of horse feed has recently dropped considerably and so has the price of fuel for tractors.

According to the latest figures issued the farm price of corn had dropped 41 per cent since last September; oats, 39 per cent since a year ago in February; hay, 18 per cent since November; and gasoline on June 1, 1931, 24½ per cent since August, 1930. New types of gasoline, retailing for as low as seven cents a gallon, not including tax, may help to lower the average gasoline price even further. From these figures, it is computed that, so far as fuel and feed are concerned, it now costs less to operate both with tractors and with horses, but beyond that, it is demonstrated that the tractor saves time and saves labor. Power farmers feel that the tractor does more thorough and more timely work, is more convenient, increases output, eliminates drudgery, operates without let-up in torrid weather, when horses suffer, and so on.

The predominating argument in favor

of the tractor is that it reduces the cost of producing crops. The corn belt farmer finds that a two-horse, one-row cultivator, working steadily for 10 hours, covers eight acres with this single row implement. A general-purpose Farmall tractor and four-row Farmall cultivator, traveling steadily at four miles an hour for 10 hours, will cover 65 acres.

In a number of studies made during the past year by International Harvester investigators, corn crops were considered, ranging from 26 to 300 acres, the average being 115 acres. The average yield is 40 bushels to the acre and the average cost \$6.85 an acre, using tractors. Using per-day horse cost as a basis and placing a high estimate on the number of acres a day the horses can be expected to cover, the total crop cost with horse power, with labor at \$3 a day, was computed at a minimum of \$9.26 an acre, including man and horse labor and overhead on machinery for plowing, disking, harrowing, planting, cultivating three times, picking and hauling.

The average cost an acre for producing corn on 4150 farms throughout the United States was \$17.09 for 1929. On

these farms, both horses and tractors were used. The average per acre cost for plowing among 35 tractor farmers who used a two-bottom plow was \$1.02; 34 of them disked at an average cost of 41 cents an acre; 26 harrowed at an average cost of 17 cents an acre; 10 of them used a four-row planter at an average cost of 42 cents an acre; 7 of them who used a four-row cultivator had an average cost of 27 cents an acre; and 20 of them used a two-row picker at an average cost of \$1.14 an acre for picking and 56 cents an acre for hauling to the crib. These costs include labor and use of tractor and machinery other than tractor. At an average cost of \$4.32 a day for the use of the tractor and \$3 a day for labor, about \$1.15 an acre is represented by other kinds of machinery.

As summarized by power-farming advocates, the tractor, by cutting man labor to nearly one-third, reduces the per-acre cost \$4.73, or 51 per cent. On just one 115-acre crop, the farmer saves \$543.69, or enough to pay two-thirds of the f.o.b. price of his tractor in one year. Also, it is figured that further savings arise in comparison between fuel costs and feed costs.

## Foreign Trade Conference

Utilization of foreign trade as a means of lessening the effect of the present depression will be the keynote of the eleventh annual session of the Middle West Foreign Trade and Merchant Marine Conference, at Louisville, October 27-28.

Special stress will be laid on prospects of greater trade development in Latin American countries and the part waterway development of the Ohio and Mississippi valleys will play in promotion of cheaper and more effective transportation.

The conferences will be held at the Brown Hotel, Louisville, the Middle West Foreign Trade Committee with headquarters in the Chamber of Commerce Building, Cincinnati, having been given cooperation of the following organizations: Louisville Board of Trade;

Associated Industries of Kentucky; U. S. Bureau of Foreign and Domestic Commerce; Transportation Club of Louisville; Louisville Credit Men's Association; Advertising Club of Louisville; and the New Albany and Jeffersonville, Indiana, Chambers of Commerce.

## \$249,000 Foundation Contract

Atlanta, Ga.—Contract for foundations and tunnel work for the \$1,500,000 post office and Federal building to be erected here has been awarded by the Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, to the National Construction Co., Inc., Washington, at \$249,000. A. Ten Eyck Brown is the architect; A. Berili, Jr., associate architect; J. Wharton Humphreys, associate; Robert G. Lose, structural engineer, and Robert Newcomb, mechanical engineer, all of Atlanta.

## \$2,318,000 Senate Wing Bid

Washington, D. C.—Low bid to erect a new wing along First street to connect the two wings of the Senate Office building has been submitted to David Lynn, Architect of the Capitol, by the George A. Fuller Co., Washington, at \$2,318,000. The structure will be 5 stories, 291 by 71 feet. Wyeth & Sullivan, Washington, are the architects.

## Dugan Heads Sanitary Engineers

Richmond, Va.—At the annual meeting here of the American Society of Sanitary Engineers, Thomas M. Dugan, McKeesport, Pa., secretary, was elected to the presidency, succeeding A. R. McGonegal, Washington, D. C. J. F. Doud, Cincinnati, Ohio, was elected treasurer and James R. Walker, Waterbury, Conn., librarian.



## Office Structure for Physicians

The new \$1,000,000 W. W. Orr Doctors' Building, erected at Atlanta by the Marlborough Company, Paul W. Miller, president, is one of the outstanding structures of its kind in the South. The project embraces an 11-story office building, covering a site 75 by 107 feet, for the use of physicians, surgeons, dentists and other specialists; a 1-story group of store rooms and a garage.

Exterior of the building is of Indiana limestone over a granite base for 2 stories, above which is used cream brick with decorative panels of terra cotta. Main entrance on Peachtree street is framed by fluted granite columns and enriched with cast bronze grills. The floor of the public lobby is of Roman and Sienna travertine with walls faced with travertine and trimmed with black and gold marble. All public lobbies and corridors on the upper floors are wainscoted with Alabama marble and floored with rubber tile. Steel windows have been used throughout the structure. Two distinct electric wiring systems have been installed, one for lighting, the other for X-ray service.

Heat is supplied by two boilers with automatic controls. All radiators are of a compact cabinet type hung on the walls below the window sills. Basement is mechanically ventilated by supply and exhaust fans and is sprinkler equipped. Other facilities in the basement include a gas fired water heater, incinerator, air compressor and refrigerator units. Refrigerated drinking water is supplied at

the fountains on each floor as well as to individual drinking fountains and developing tanks in the offices. Gas and compressed air are available at many points in the building and each office is equipped with a signal system of push buttons, buzzers and annunciators.

Pringle and Smith were the architects and the Southern Ferro Concrete Company, general contractors, both of Atlanta. The following major sub-contracts were awarded:

**Structural steel**—Ingalls Iron Works Co., Birmingham, Ala.  
**Limestone**—Indiana Limestone Co., Bedford, Ind.  
**Granite**—Cold Spring Granite Co., Cold Spring, Minn.  
**Electric wiring**—Walker Electrical Co., Atlanta  
**Plumbing, heating and ventilating**—Stephenson Co., Inc., Atlanta  
**Elevator enclosures and hollow metal doors**—Paltridge Metal Equipment Co., Chicago, Ill.  
**Jams**—Kalman Steel Co., Atlanta  
**Steel spiral fire escape**—Logan Company, Louisville, Ky.  
**Tile and terrazzo**—J. Korizon Tile Co., Atlanta  
**Face brick**—Claycraft Mining & Brick Co., Columbus, Ohio; V. H. Kriegshaber & Sons, Atlanta, agents  
**Hollow clay tile**—Cromer & Thornton, Inc., Atlanta  
**Ornamental and miscellaneous iron**—Cole Iron Works, Atlanta  
**Ornamental bronze work, glass and glazing**—F. J. Cooledge & Sons, Atlanta  
**Metal windows**—Detroit Steel Products Co., Detroit, Mich.; Applewhite & Lawler Co., Atlanta, agents  
**Steel sash**—Truscon Steel Co., Youngstown, Ohio  
**Elevators**—American Elevator & Machine Co., Louisville, Ky.

### \$1,434,000 Winston-Salem Bonds

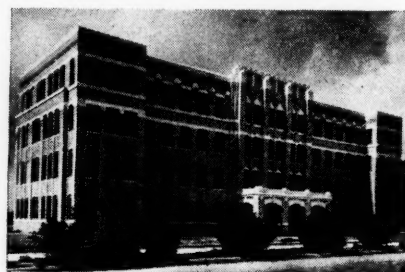
Winston-Salem, N. C.—Winston-Salem bonds in the amount of \$1,434,000, to bear an interest rate of 4½ per cent. have been sold at \$1,434,430 by the State Local Government Commission, Raleigh, to the Wachovia Bank & Trust Co., Winston-Salem, bidding jointly with the National City Company and Chase Harris Forbes Corporation, New York. The entire issue includes \$900,000 funding bonds, \$459,000 refunding bonds and \$75,000 water improvement bonds.

### National Tax Conference

A world-wide tax conference is to be held in Atlanta, Ga., at the Atlanta Biltmore Hotel, October 12 to 16. A preliminary announcement states that authorities on questions of taxation and economics are expected to be present, from all over the world, to discuss topics pertinent to the meeting.

### New Hospital at Galveston

The State Psychopathic Hospital, established by the State of Texas at Galveston, opened recently under direction of Dr. Giles W. Day, superintendent. This 4-story building of attractive design is constructed of reinforced concrete and brick, and contains 63 rooms, with additional vocational-therapy rooms. It is located adjacent to the State Medical College, which will provide a consulting staff for the hospital, the institution in turn furnishing clinical material for the student body. The structure was erected by the Underhill Construction Co., Dallas, after plans by Wyatt C. Hedrick, Inc., Fort Worth.



Texas State Psychopathic Hospital

### \$500,000 Mill Contract

Lyman, S. C.—The Pacific Mills, Lawrence, Mass., have awarded general contract to the Gallivan Construction Co., Greenville, S. C., to erect a \$500,000 addition to the Lyman plant, which will increase production about 25 per cent. To the present output of bleached and dyed goods it is planned to add printing. The new addition is expected to be completed about the first of January, employing several hundred operatives. Lockwood Greene Engineers, Inc., Spartanburg, S. C., are the engineers.

### Newport News Firm to Build Ships

Newport News, Va.—Two steamships to be built by the Colombian Mail Steamship Corporation, New York, for operation on the mail route from New York to Puerto Colombia or Cartegena, Colombia, and possibly to both, by way of Port-au-Prince, Haiti, and Kingston, Jamaica, will be constructed by the Newport News Shipbuilding and Dry Dock Company. The vessels will be 404 feet long, 57.6 feet beam, with a tonnage of 4400 and a speed of 16 knots. A total of 54,000 cubic feet of refrigerated space will be provided for perishable freight. Passenger accommodations will also be provided. The ships will cost \$2,300,000 each and loans up to \$1,725,000 on each were authorized by the Shipping Board.



W. W. Orr Doctor's Building, Atlanta

## LETTERS FROM OUR READERS

### The Wage Question

Industrial Bureau of the Granite City  
District, Inc.

Granite City, Ill.

*Editor Manufacturers Record:*

The wage question is always a difficult one to discuss. It is so easy to be misunderstood. It is necessary, however, to recognize the difference between nominal or money wages, and real wages. If, under the changed conditions and the lower cost of living, money wages are left as they were, it amounts to an increase in real wages. There could be some readjustment generally in rates of pay which, while lessening money wages, would in no wise affect the standard of living, and if such readjustments are necessary, perhaps only temporarily, in order to enable this or that line of business to carry on through the recession without creating a deficit, they ought to be made, but only after every other reasonable effort has been put forth to avoid losses.

This is commonsense. If a business gets into difficulties because it chooses or dares not enforce pay readjustments, and eventually closes its doors, it then ceases to furnish any employment. A shutdown factory is no good to anyone. No fair-minded American worker would hesitate an instant to accept, and gladly, a reduction, even greater than justified by the lessened cost of living, if convinced that his sacrifice, in all probability only temporary, meant saving the business and his job.

Again, a distinction is necessary between rates of compensation which have not been inflated and those, which due to the efforts of some labor organization or to governmental action, are disproportionately high. The nation cannot be healthy economically if there is much disparity in the compensation of different occupations which is not based upon relative skill. In other words, we cannot have a specially favored class of workers without all other classes suffering—the latter must do with less because the former exact more than a just proportion of the total wage fund. It must be obvious, for example, that a dollar-an-hour mechanic in a factory cannot buy as much of a \$2-an-hour building mechanic's time as he would like, and as he should be able to do, if normal employment is to be furnished the latter and if the former is to enjoy the sort of a habitation to which he is justly entitled.

True, the factory worker is much less liable to broken time, and the outside man may not, in spite of his higher hourly rating, earn any more money over a given period. But that is no reason why the factory worker, as an individual, should be obliged to pay twice or three times as much for another man's labor of no higher degree of skill. And what is more to the point, he contrives not to pay it, by doing with a cheaper house or "doubling up," and by having no repairs made which he cannot do himself.

The result we are witnessing right

now: a virtual subsidence of building, particularly in the residential field. To many it looks as if the market had been killed by excessive costs, due largely if not wholly to the high wage scales prevailing almost everywhere in the building trades. Of what benefit are these high scales, if the mass of the people cannot afford to or won't buy any of your time? Better, far better, rates of pay that constitute an inducement to people to use your skill. Keep busy! Figure on earning a larger yearly wage. An hourly or per diem price upon your services that appeals to the majority as reasonable may and should bring about this happy result.

The building craftsmen have something to sell. Then if they would have lots of buyers, let them be good merchants and place a value upon their time and services that will pull a volume of business.

Is there anything radical about this? Anything unfriendly to labor? Rather is it not common sense and in the best interests of labor?

I favor steadily increasing wages, if accompanied by increased efficiency. Let me go farther and say that I advocate increased income for building workers—a greater, much greater sum to be paid labor in this classification in the period ahead—by getting costs down to where a volume of work is cut loose, more men are put to work.

This would be a real advance in wages. Let me illustrate. Assume that in a certain community, with present prices, \$1,000,000 will be spent next year for housing. Roughly one-half of this will go to building labor. But to furnish reasonably full employment for all the men in the trades, there should be thrice as much work. If priced in accordance with other products, thrice the volume would involve an expenditure of, say, \$2,250,000 (instead of \$3,000,000 as now). Of this, on the new basis, building labor would get around \$750,000, leaving \$1,500,000 for materials. Supplying this increased volume of building materials, would mean work for a lot more men in the mines, mills, quarries and yards, in transportation, and in making and servicing building, manufacturing and transporting equipment. Thus an expanding circle would be generated. Whereas, under present conditions, the circle constantly gets smaller and prosperity becomes more and more elusive.\*

HARRY F. PORTER,  
Managing Director.

### The War Debt Pall

Dallas, Tex.

*Editor Manufacturers Record:*

Your recent cover page editorial is a most sensible outline of the cotton situation. The situation will adjust itself. The enormous size of the crop means smaller compensation to the planter, but the crop must be picked and the picking thereof will afford employment.

I have in mind a darker pall hanging

over the country than either the cotton situation or the oil dilemma. I think it behooves the big men of the entire country to hold meetings in their respective states and to concentrate at Washington and draft a petition supporting the advance report of the Wiggin Committee, on the dire necessity of revising, re-vamping, or even cancelling the entire war debts. This is no time for one section of the country to ask favors of the rest of the country. The whole world demands cooperation. The United States cannot prosper while Europe and England continue to flounder.

JOHN S. ALDEHOFF.

### Use More Cotton

Department of  
Agriculture and Immigration  
State of Louisiana

Baton Rouge.

*Editor Manufacturers Record:*

Five young ladies recently attended a picnic in North Louisiana, wearing dresses made from cotton bagging. They made a wonderful appearance and every one said their dresses were as neat as any worn by the five thousand present. The cost of the dresses was about 90c each.

We believe with the distressed condition of cotton that the time is ripe to insist that we use cotton in America in every conceivable manner. There is no excuse for the use of jute and other substitutes from foreign countries when we are overstocked with a commodity that gives more work to more people than any other agricultural product.

HARRY D. WILSON, Commissioner.

### Loans, Instead of Dole

First and Merchants National Bank  
of Richmond  
Richmond, Va..

*Editor Manufacturers Record:*

Why not extend loans, instead of a dole, or charity? If we can loan money to Germany to rehabilitate her economic condition, we certainly can and should lend money to the worthy unemployed in this country, thereby distributing purchasing power to increase the distribution of our products and hasten business recovery.

The American unemployed do not wish the dole or any form of direct charity, if they can have the facilities to borrow money at a minimum rate during temporary unemployment; 85 per cent of our people have not these facilities. The Government can and should provide facilities for this purpose. We must increase the purchasing power of this country, and it can only be done by distributing the means to purchase—95 per cent of business is done on credit.

I suggest a loan department in our postoffices.

J. E. TYLER, JR., Assistant Cashier.



# IRON, STEEL AND METAL MARKET

## Steel Production a Trifle Lighter —Rail Inquiries Appear

Pittsburgh, September 21—[Special.]—Steel is making much the same showing as various other industries, with a lack of the seasonal improvement usually counted on to appear by this date in the year. Some observers have withdrawn their predictions of seasonal improvement in steel, others have toned down their predictions.

Steel ingot production last week was a shade lighter than in the first two weeks of the month, being at around 28 per cent, approximately a three-point drop from the August rate, which was officially reported at 31 per cent, against 34 per cent for July. Chances now are that the last four months of the year will average less than the 31 per cent rate of August, perhaps with some increases in the next few weeks over the recent rate, but with the practically inevitable slowing down always seen in the last few weeks of a year.

The Stanolind Pipe Line Company, Tulsa, Okla., has placed about 33,000 tons of line pipe for loops in its oil line, 285 miles of 12¾-inch and 10¾-inch, the Lycoming Natural Gas Company, 10,000 tons for a gas line in New York State and Standard Oil of New Jersey, 11,000 tons of 6¾-inch for a gasoline line from Providence, R. I., to Worcester, Mass.

Fabricated structural steel awards reported last week totaled a little over 30,000 tons. Outside of two large jobs recently let awards have been running light for some three months, but the fabricating shops were well booked and shipments have been running heavier than earlier in the year, this being seasonal as the peak is usually reached in October.

Automobile trade prospects are quite complicated by reason of new models being on the way and no certainty as to when they will be put into production. One rumor is that the new Ford will not come out much before the first of the year. Opinion is general that this month's automobile production will run under that of last month, about 200,000.

The farm implement industry continues to run at a very low rate, making repair parts and a few implements. The industry still has plenty of time to get into regular swing for the new season, making implements for spring distribution and use, and may not make its full start before December 1.

Rail inquiries have just appeared, fully as early as usual, making a promising

showing as there was a chance the roads would pass over the usual period. Chesapeake & Ohio is in the market for 55,000 tons, Chicago & Northwestern 30,000 tons and the Erie 26,000 tons. Rail production in the Chicago district is at 20 to 25 per cent while there is no production in the Pittsburgh district and there has been little in the last three months.

The tin plate industry is running at 45 to 50 per cent, representing quite a decrease in the last two months but still leaving tin plate as the most active of the prominent finished steel lines. Some of the vegetable packs have been light, on account of a large carryover, and general line demand is off from a year ago.

Finished steel prices are very steady all along the line, and have been so for some time past, sheets, wire products and strips being at advances. At first there was some doubt whether these advances would hold but now there appears to be no question. In these particular lines prices had been below cost and current prices are said to be below cost with the light operating rates now ruling.

In some lines mills have made announcements as to fourth quarter prices while in other cases nothing has been said, but it is well settled that current prices are to be continued, mills making no effort to secure advances. Costs are being cut rigidly at all points. There is a fresh report that the Steel Corporation will make a general wage reduction in the near future.

The scrap market remains dull but prices hold firmly. Outcome is very light.

## Copper and Other Metals in Price Declines

New York, September 21—[Special.]—Some of the metals have declined further in price, copper dipping to new all-time low levels, selling as low as 7 cents per pound, or less than one third the price at which the metal was selling in March, 1929. Zinc has yielded to the extent of \$1 per ton, while tin has sold as low as 25 cents per pound as against 27 cents in recent weeks.

None of the metals has been active and reductions in export prices of copper failed to exert the usual stimulus. All except copper are still comfortably above their low points for this year, however. Statistical trends are satisfactory. Re-

duction in surplus stocks took place in both lead and zinc. Only copper continues highly unfavorable, surplus stocks of refined metal having gained over 15,000 tons last month.

In the case of lead the reduction in surplus stocks was the fourth successive one. Surplus stocks of zinc are now the lowest in a year. Though stocks of copper increased, the trends were in the correct direction—that is, refined production was lower and shipments were larger. The fly in the ointment is the fact that production is still in excess of shipments.

There is still some disappointment in business circles that the usual fall improvement is so slow in asserting itself. Some encouragement is derived from the fact that improved buying has taken place in necessities of life such as shoes and other forms of clothing, tires, etc., all of which indicates that goods in the hands of consumers are wearing out and need to be replaced.

The steel industry gives a slightly better account of itself, there being better demand for steel rails, steel pipe and fabricated structural steel. Building operations continue to be promising, which will afford a good outlet for non-ferrous metals. The largest nickel contract ever recorded for the equipment of a building was recently placed for the new Waldorf-Astoria, the nickel being in the form of alloys and kitchen equipment, etc.

Export price of copper has been reduced to 7½ cents per pound. Copper has sold in the domestic market for 7 cents. Bare copper wire is selling at 9 cents. Derivatives of copper, such as copper sulphate, are also selling at record low prices. There is some complaint, however, because highly finished metal products, such as copper boilers for home water-heating systems, have not been reduced in price nearly to the extent of the cruder product. This is due largely to the fact that a greater element of labor enters the more finished product.

With surplus stocks of copper at the highest level in history it becomes more apparent that steps must be taken to curtail production, if consumption cannot be stimulated. There is talk of another conference of producers. Some believe such conferences are not necessary and that low prices will automatically cause shutting down of copper properties and other forms of curtailment. It was in October of last year that the original curtailment agreement was engineered and it is quite possible the same month



will be the time for another such group meeting.

Export sales of copper so far this month have been about 10,000 tons, about the same rate as in August. Along with poor domestic sales, this is not large enough to take care of current output. The industry expects no substantial copper buying movement over the rest of this year from home consumers, but expects good sales abroad since foreign users have not contracted so far ahead.

It is said that lead sales during the past week have been the smallest in several years, probably accounted for by the fact that purchasing was so brisk during late August and early September. The price of lead ore in the tri-State district is being maintained at \$50 per ton. Unemployed miners who have become freelance prospectors and ore-diggers have uncovered some good deposits of zinc.

The unemployment situation has also caused a larger production of gold. Miners are panning the creeks of California, for instance, and eking out a few cents of profit a day through their findings.

Weakness of the tin market has caused disappointment to the industry in view of elaborate plans made to cut down production and form a pool to remove surplus stocks from the market.

### Operations in Birmingham Remain Steady

Birmingham, Ala., September 21—[Special.]—Steady operation of eight open hearth furnaces gives the estimate of steel mill operations based on ingot production at 30 per cent capacity. Sheet mills are still making 50 per cent capacity and better, plate mills are following closely, while other producers are doing a little less. Structural steel fabricators are maintaining a five to five and half days a week schedule but the business coming in is mostly in tonnages under the 100 mark.

Pig iron production has been scaled down until it now is not much more than the shipments. A little encouragement is found in the fact that addition to the surplus stock is about at an end and that a little tonnage has started to Atlantic coast ports. A concession on the freight rates brought out a report that there had been a change in the base price of pig iron but this is denied. Iron for consumption in the home territory is held at \$12. No. 2 foundry, and for use elsewhere is stated at \$11. Eight blast furnaces have been making iron, all but one on foundry iron. Four of the furnaces are producing slow, another plan to hold down the make.

Survey among the home melters of

pig iron shows that, while there is a better feeling, the actual melt has shown no improvement recently. Cast iron pressure pipe lettings have not amounted to a great deal and specifications are few and far between. Machine shops and foundries are buying in small quantity but frequently, making predictions for the future unsatisfactory.

In the steel line there has been much discussion of big contracts let in the Southern territory recently and Birmingham fabricators are yet confident there will be some business coming out of these awards. The big highway-railroad bridge across the Mississippi near New Orleans will require 60,000 tons of steel, with Pittsburgh supplying the greater portion. Miami postoffice will need 2000 tons, if not more. Other governmental construction will require steel as well as other products of the Birmingham district. An addition to a veterans hospital for colored patients, at Tuskegee, Ala., will provide an outlet for some steel and other material.

Clay products manufacturers, especially in hollow-tile and roofing tile report new business coming in, but at very low prices. An asylum in Mississippi and

roofing at Fort Benning, Ga., and other development has brought orders to producers here which add to backlogs.

Portland cement mills are operating at a pace about 60 per cent, with warehouse stock being resorted to. There is belief that this activity will continue through the remainder of the year, for construction work and road building throughout the South.

The coal industry is still suffering, with production not more than 60 per cent normal. The coke trade is also slow with a few more than half of the 1390 ovens at by-product works in operation.

Quotations on pig iron and iron and steel scrap in the Birmingham district are as follows:

#### PIG IRON

No. 2 foundry, 1.75 to 2.25 per cent silicon, \$12.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$12.50; iron of 2.75 to 3.25 per cent silicon, \$13.00; iron of 3.25 to 3.75 per cent silicon, \$14.00.

#### OLD MATERIAL

Steel rails .....	\$10.00 to \$11.00
Steel axles .....	11.50 to 12.00
Iron axles .....	11.00 to 12.00
Heavy melting steel .....	7.50 to 8.50
No. 1 cast .....	9.00 to 10.00
Stove plate .....	9.00 to 10.00
No. 1 R. R. wrought .....	8.00 to 8.50
Car wheels .....	8.00 to 9.00
Tramcar wheels .....	8.50 to 9.50
Machine turnings .....	3.50 to 4.50
Cast-iron borings .....	3.50 to 4.50
Rails for re-rolling .....	10.25 to 11.00

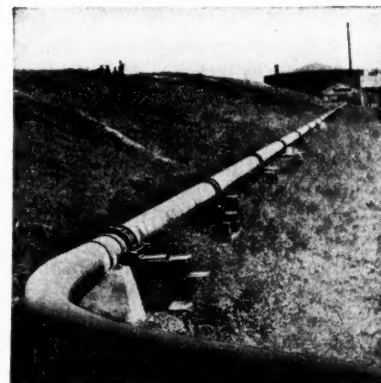
### Style in Packaging

"There are few media which touch the marketing process at so many points as does the proper package," stated Irma Marohn, package stylist of Robert Gair Company, New York, in a recent address. The department and specialty stores of this country alone distribute almost 3,000,000,000 packages annually, Mr. Marohn said.

"Other factors which contribute to the importance of good packaging are the rapid pace of metropolitan life, and the practically self-service merchandising methods of retail stores which necessitate that the package itself serve as a silent and persuasive salesman," he continued. "Further, the congested manner of living demands compactness, convenience and attractiveness in the packaging of commodities which were formerly bought in larger quantities, in bulk, and stored out of sight. Because we purchase smaller units which are kept conveniently on hand and in view in kitchenettes, bathrooms and nurseries we want a reasonably attractive package and one conveniently shaped so that it can be readily handled."

Among the elements embodied in the term "style" in package design and construction are shape, suitability to contents and convenience; design, pleasing

simplicity in describing contents; typography, simple legible lettering without overcrowding; and color, appropriate fresh colors indicating contents of package if possible.



Pipeline Carries Molasses

In the New Orleans district a pipe line has been used for several years for transporting molasses. This view shows a section of the line with Dresser couplings as manufactured by the S. R. Dresser Manufacturing Co., Bradford, Pa.

# HIGHWAYS AND MOTOR TRANSPORT

## Impose Municipal Gas Tax

Palatka, Fla.—A 1-cent gasoline tax imposed by city ordinance has gone into effect here. This is in addition to a tax of 7 cents. Pensacola has imposed a 1-cent city tax on gasoline for some time, the revenue being used for street repair.

unless the county commissioners insist upon the award of a general contract. All common labor will be recruited from the county wherein the work is being performed. Non-residents of the State of Oklahoma will not be employed. Preference will be given to the most needy and this will be determined by the county commissioners or designated commit-

tees working in cooperation with the resident engineer.

Upon completion of a farm-to-market road project, the county will become responsible for its maintenance out of its county highway construction maintenance fund, under contract until July 1, 1933, pending a new contract or new legislation.

## \$27,000,000 Federal Funds Available for Roads

Washington, D. C.—A balance of \$27,124,941 is available in Federal aid road funds for new projects, according to the Bureau of Public Roads. In this announcement, the Bureau states that \$170,924,029 in Federal aid had been allotted for roads under construction and an additional \$18,584,139 for roads approved for construction.

## Farm-to-Market Roads for Oklahoma

Oklahoma has undertaken an extensive farm-to-market road building program to provide transportation for communities not on the State highway system, to connect towns and communities to the State highway system and to form connecting links between small towns. These roads are to be laid out primarily for local traffic. Consideration, therefore, will not be given through traffic either in locating the roads or determining the type of construction.

Farm-to-market roads will be designated by the State Highway Commission at the request of the respective boards of county commissioners. Work will be performed under the supervision of the State Highway Commission, after an agreement has been entered into between the State Highway Commission and the county commissioners covering such projects, which comprise grading, drainage structures, graveling, oiling, etc. Since these roads will be primarily for local use the counties and local communities will share a substantial part of the cost of the work. The counties will furnish all necessary rights-of-way. Standards of construction will be designed to meet the requirements of lighter traffic and to facilitate the construction of as great a mileage as possible.

To relieve the unemployment situation all work will be handled by day labor

## Bridge and Swamp Fill Completed

The State Highway Board of Georgia recently completed the Doctortown bridge project on State Route No. 38, between Jesup and Ludowici, bringing Quitman, Valdosta, Thomasville and other towns in that section 40 miles nearer by highway to Savannah. The project covers seven miles of heavy fill through the Altamaha River swamp, and includes 9 bridges, costing \$550,000. Grading was in excess of 80,000 cubic yards per mile.

Contractors on the job included F. M. Jones, Jesup, Ga., who built the bridges; Mallory & Nash, Atlanta, bituminous bridge mats; John Monaghan, sand clay surfacing, and the following who did grading work: T. T. Sweet Dredging Co., Jacksonville; Nichols Contracting Co., Atlanta; N. J. Morgan, Talladega, Ala., and Chatham County. Steel for bridge No. 1 was furnished by Roanoke Iron & Bridge Works, Roanoke, Va.



Bridge No. 1, Crossing the Altamaha River on State Route No. 38



View North Along Right Side of New Bridge



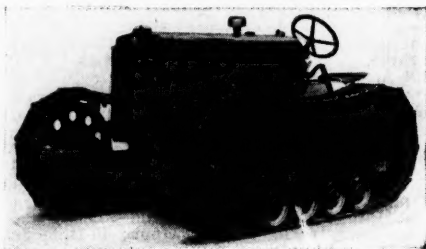
A Stretch of the New Jesup-Ludowici Highway in Wayne and Long Counties, Georgia



# NEW AND IMPROVED EQUIPMENT

## Heavy Duty Trackson Crawler

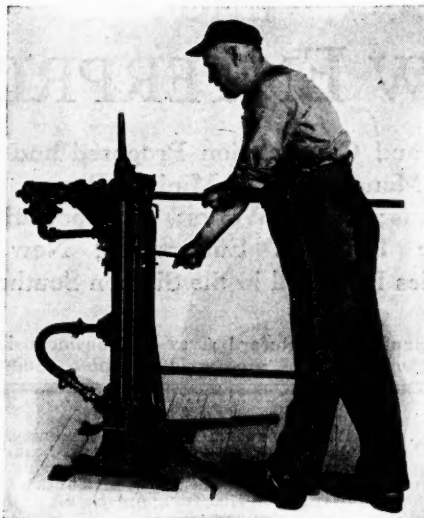
The Trackson Company, Milwaukee, Wis., announce a new heavy duty Trackson Crawler, model GC, available for the Case Industrial Tractor, made by J. I. Case Co., Racine, Wis. The combination is adapted to a wide range of uses and is particularly suited not only to draw-bar work but also to equipment operation. Its design provides for actual in-building of front, side or rear-end equipment, the purpose being to furnish a type of crawler tractor adapted to many different purposes. Shovels, loaders, bulldozers, hoists, cranes, etc., are readily interchangeable, and the correct operation of any of these attachments is said to be assured by the fine balance and structural strength of the combination. The motor unit is centered fore and aft between the crawlers, while extra heavy crawler frames, truck wheels and bearings provide ample strength for superimposed loads of equipment operation. Crawlers are of all steel and track shoes are of electric alloy steel, cast in one piece and specially corrugated to grip securely without damaging roads. Wide clearance between the crawlers and motor permits quick attachment and adjustment or lubrication of the crawler mechanism.



Trackson-Case Combination Adapted to Many Uses

## Portable Machine for Drill Sharpening

A new light portable drill sharpening machine, designed to bring the advantages of mechanical sharpening and shanking of rock drill and hammer drill steel to mines, contractors, quarrymen and public works departments, has been introduced by the Sullivan Machinery Company, Chicago. Known as the Sullivan Class "E" Sharpener, the new machine makes cross or rose bits to 2½ inches maximum gauge, with either 14- or 20-degree wing taper, on ⅞-inch or 1-inch steel. It consists of a pedestal or frame of electric steel mounted on



Sullivan Class "E" Sharpener

foot plates, with a horizontal or upsetting hammer attached to a bracket at the top of the pedestal, and a vertical or swaging hammer within the pedestal. The machine forges collar shanks, and dies are available for any steel section. In addition, it forms and sharpens concrete breaker pick or chisel bits on steel as large as 1½-inch hexagon. Standing a little more than 4 feet in overall

height, the machine weighs only 350 pounds, occupies a floor area of 18 inches square, and may be operated without other foundation than that provided by bolting it to the floor or to light timbers.

## Designs New Motor

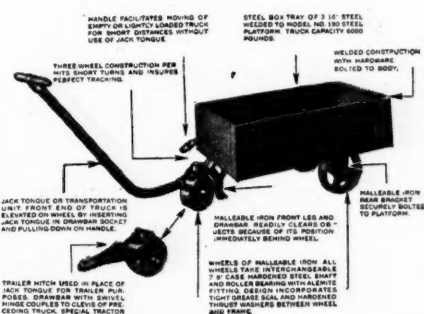
Jacksonville, Fla.—A new electric out-board motor for use in glass bottom boats for sight seeing has been developed by the Jacksonville Machine and Dry Dock Company, Inc., W. H. Burns, president. In collaboration with A. W. Teahen, mechanical engineer, Mr. Burns has conducted experiments for more than a year. The new motor is said to have many advantages, such as the elimination of gas fumes, fire hazard and noise, and is described as being not an invention but an assembly of parts, consisting of an electric motor of the type used on warehouse trucks and a standard out-board lower unit containing shaft and propeller. Power will be furnished by four 3-cell batteries, said to be capable of running the boat-propelling motor continuously for 10 hours, the maximum time the boats will be used each day. The boats are owned and operated by the Ray and Davison Company, Ocala, Fla.

## Jak-Tung Industrial Trucks

An improved Jak-Tung Truck for industrial and warehouse use has been announced by the Howe Chain Company, Muskegon, Mich. Simple in design, the truck embodies as its basic principle the construction of the "tote truck" marketed by the Howe organization. It is adapted for use as a hand truck or trailer and for temporary storage of materials. The body is of hardwood or steel, suitably shaped for the product to be handled, and is permanently attached to two rear wheels with a malleable iron lug supporting the front. This represents the storage unit. For use as a hand truck, a jack tongue is inserted in the drawbar and a simple downward movement of the handle exercises a cam action, elevating the front lug 1¼ inches from the

Adapted for Use as Hand Truck or Trailer and for Temporary Storage

floor and transferring the load to the jack tongue wheel. Trucks may be coupled in a tractor train by removing the jack tongue and inserting in its place a trailer hitch coupled to the clevis of the preceding truck. Three-wheel construction



tion insures accurate tracking, permits short turns and the use of narrow passageways. Coordination of the trucks with overhead monorail systems makes for efficient and low cost material handling.



# CONSTRUCTION DEPARTMENT and NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Construction Bulletin of the Manufacturers Record gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

## Airports, Airplane Plants, Etc.

Ala., Maxwell Field—Algernon Blair, First Natl. Bk. Bldg., Montgomery, low bidder for radio building.

La., Barksdale Field—Kenneth L. Colborn, Inc., Randolph Field, Tex., low bidder at \$286,000 for construction 4 air corps hangars, air corps assembly shop, air corps warehouse and air corps hangar wing operation bldg. 9-10

La., Barksdale Field—W. H. O'Toole Construction Co., 103 Grayling Lane, Monroe, reported, low bidders at \$28,000, for constructing gas distribution system complete and furnishing and installing 6-in. compound water meter. 9-10

Mo., Kansas City—Bd. of Public Works, reported, let contract to Candless Bldg. Co., Victor Bldg., for 120x400 ft. hangar with repair shop to occupy portion of 50x400 ft. leanto; 1-story motor and testing bldg., 40x120 ft. and office unit 40x170 ft.; cost \$250,000 with equipment; Alonzo H. Gentry, Inc., Archts., 109 W. 11th St. 8-20

Mo., St. Louis—Dunham Construction Co., Chemical Bldg., reported, has contract for rein. conc. base for floodlights, Lambert-St. Louis Airport. 8-20

Mo., St. Louis—Monocoupe Corp., Phil DeC. Ball, Pres., Moline, Ill., reported, removing plant to St. Louis; manufactures light 2-passenger plane; annual capacity 600 planes; has building at Lambert-St. Louis Field.

Tennessee—Cities of Kingsport, Elizabethton, Jonesboro and Erwin, reported, interested in joint airport; S. A. Dorsett, Chmn., Kingsport Airport Committee. 7-9

Tex., Galveston—Bd. of Commrs., Arthur Peterson, Commr. Finance, receiving bids for V-shaped administration building and for 80x100 ft. hangar; 9000 ft. fencing being constructed around airport.

Tex., Randolph Field—Aqua System, 2 Lafayette St., New York, reported, has contract at \$47,900, for gasoline fueling system, including electric pump station, pit fueling boxes, pit lights, water meters, etc.; Standard Sanitary Mfg. Co., 1101 Bdwy., San Antonio, at \$13,903, for pipe and fittings. 9-17

Tex., Randolph Field—Amiesite Co. of Texas, Marvin Bldg., Dallas, reported, has contract at \$218,005, for hangar apron paving, conc. curbs, storm sewer inlets and conc. sidewalks; Capt. A. W. Parker, C. Q. M., San Antonio. 8-13

## Bridges, Culverts and Viaducts

### Proposed Construction

Fla., Miami—Dade County Commrs. have low bid from Harry F. Ryder, 522 N. E. 66th St., for repairs to 2 wooden bridges, 79th St. causeway; considering purchasing piling and doing work with county forces. 8-20

LOUISIANA—State Highway Comsn., O. K. Allen, Chmn., Baton Rouge, opens bids Oct. 20 for 4 bridges in following parishes: Orleans-St. Bernard—Bayou Bienvenue bridge, Route 61, Versailles-Chef Menteur Highway (Bond F. R.), Proj. 677-B, 160-ft. swing span on conc. capped creosoted timber piling, 20-ft. roadway;

Rapides—Willow Glenn overhead crossing, T. & P. R. R., M. P. R. R. and C. R. I. &

P. R. R., Alexandria-Lecompte Highway, Route 1 (Bond), Proj. 4907, series of I-beam spans of varying lengths on rein. conv. framed bents and pile bents, total length of spans 454 ft., also 1700 ft. approach fill and paving, 24-ft. roadway;

Tangipahoa—Tangipahoa River bridge and approaches, Route 35, Amite-Franklinton Highway (Bond), Proj. 6209, 200-ft. steel fixed span on conc. piers, 102 19-ft. I-beam spans on creosoted timber piles, 2.4 mi. grading, draining, 24-ft. bridge roadway;

Washington—Bogue Chitto River bridge and approaches, Franklinton-Amite Highway, Routes 34 and 35 (Bond), Proj. 6804, 200-ft. fixed span on conc. piers, 2 50-ft. and 98 19-ft. combination I-beam spans on creosoted timber piles, 2.0 mi. grading, draining, 24-ft. bridge roadway.

La., New Orleans—City, Office Pur. Agt., Room 24, City Hall, will not open bids Oct. 6 as planned for Newton St. viaduct over railway tracks, Algiers; announce definite date in near future. 9-17

La., New Orleans—New Orleans Public Belt R. R., Frank H. Joubert, Sec.-Treas., Gen. Mgr., Municipal Bldg., reported, has following low bids for railroad and highway bridge over Mississippi River: Cont. 3, substructure main bridge, Siems-Helmers, Inc., 1014 Guardian Bldg., St. Paul, Minn., \$3,083,185; Cont. 4, superstructure main bridge, American Bridge Co., 71 Broadway, New York, \$2,618,670; Cont. 5, substructure approaches, MacDonald Engineering Co., 1 La Salle St., Chicago, Ill., \$496,337; Cont. 6, superstructure approaches, McClintic-Marshall Corp., 39 Broadway, New York, \$3,226,789; Virginia Bridge & Iron Co., Roanoke, Va., \$3,230,180; Modjeski, Masters & Chase, Engrs., 121 E. 34th St., New York. 9-10

Maryland—State of Maryland, 5 bridges. See Roads, Streets and Paving.

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, opens bids Oct. 13 for 2 bridges in following counties:

Cecil—double leaf bascule span superstructure, complete, required for bridge over Bohemia River, road Chesapeake City to Cecilton, Ce-118-27;

Dorchester—double leaf bascule span superstructure, complete, for bridge over Marshyhope Creek, road from Rhodesdale to Eldorado at Brookview, D-84-17.

Mississippi—State Highway Comsn., C. Simmons, Bridge Engr., Jackson, advises funds not yet provided and plans not completed for replacing bridge over St. Catherine's Creek. 9-10

Miss., Columbus—Lowndes County Supvrs., John J. Richards, Clk., opens bids Oct. 8 for extension to conc. culvert, Hairston gravel pit, Highway 45, Dist. 5; extension to 5 conc. culverts and bridges, Bent Oak-Artesia road, Dist. 5.

Miss., Magnolia—Pike County Supvrs., C. E. Brumfield, Clk., opens bids Oct. 5 for bridge, Brent road, Fourth Dist.

Miss., Oxford—Lafayette County Supvrs., G. A. Woodward, Chancery Clk., Courthouse, opens bids Oct. 5 for 4 wood bridges.

Missouri—State Highway Comsn., T. H. Cutler, Ch. Engr., Jefferson City, has plans approved by Water Dept., Washington, for bridge over Black River, 12 mi. southeast Poplar Bluff.

North Carolina—See Roads, Streets and Paving.

## Contracts Awarded

D. C., Washington—Dist. Commrs., R. M. Brennan, Dist. Bldg., let contract to W. C. Briddell Co., Inc., Drivers & Mechanics Natl. Bk. Bldg., Baltimore, Md., for subway and approaches, Piney Branch road, at \$77,357. 9-17

Florida—State Road Dept., Robt. W. Bentley, Chmn., tentatively let contract to R. J. Arrington, Defuniak Springs, at \$34,986, for bridge over Ochlocknee River, Leon-Liberty County line. 9-3

Ky., Ashland—McClintic-Marshall Corp., Pittsburgh, Pa., has contract for 590 tons struc. steel for Winchester Ave. viaduct; Rust Engineering Co., Koppers Bldg., Pittsburgh, Pa., and E. R. Mills, Covington, Ky., Gen. Contrs. (See Roads, Streets and Paving, 9-3)

Louisiana—Mt. Vernon Bridge Co., Mt. Vernon, Ohio, and Nashville Bridge Co., Nashville, Tenn., have contracts for 8000 tons struc. steel for bridges for State Highway Comsn., over Atchafalaya River, Morgan City and Krotz Spring; Foundation Co., 120 Liberty St., New York, Gen. Contr. (See Roads, Streets and Paving, 9-3).

Mississippi—State Highway Comsn., C. Simmons, Bridge Engr., Jackson, let contract to Stuart Irby & Co., 120 W. Congress St., Jackson, for electric lighting equipment and installation on Biloxi Bay bridge, Jackson-Harrison Counties, FAP 194-A. 8-27

Tenn., Knoxville—City Council let contract to Murray Construction Co., at \$21,652, for Henley St. bridge approaches; Booth & Flynn, Gen. Contr., 1924 Forbes St., Pittsburgh, Pa. 5-21

Tex., Amarillo—City and Chicago, Rock Island & Pacific Ry. Co., W. H. Petersen, Ch. Engr., Chicago, Ill., build \$15,000 viaduct over tracks by day labor; 40-ft. conc. roadway, 80 ft. long, 500 cu. yd. rein. conc., 200 cu. yd. excavation, 50,000 lb. rein. steel, 54,000 lb. struc. steel, 10,000 cu. yd. filling, 30,000 bd. ft. lumber.

Tex., Brownwood—Brown County Commrs. let contract to W. S. Thomson Construction Co., San Angelo, at \$55,869, for conc. steel bridge over Jim Ned Creek, Brownwood-Cross Cut road; Leo Ehlinger, State Res. Engr., to supervise construction; to McDonald, Moore & Son, Brownwood, at \$33,967, for bridge over Pecan Bayou.

Tex., Columbus—Colorado County Commrs. Court let contract to Missouri Valley Bridge & Iron Co., Kirby Bldg., Dallas, for steel bridge over Colorado River, Altair, at \$58,190; 416 ft. long, conc. floor.

## Canning and Packing Plants

Fla., Fernandina—Oceanic Packing Co. incorporated; S. R. Merrow.

Fla., Winter Haven—Bordo Products Co., reported, interested in establishing co-operative canning plant.

Md., Baltimore—J. H. Collison & Co., Inc., 105 E. York St., incorporated; Harry B. Collison, Key Highway.

Tenn., Memphis—Buehignani Canning Co. incorporated; Lake Hays, Fidelity Bk. Bldg.

Texas—Rio Grande Vegetable Co-operative Assn., George B. Warren, Weslaco, Mgr., reported, plans 6 master packing plants throughout Rio Grande Valley at McAllen, Edinburg, Edcouch, Los Fresnos, Primavera and Brownsville.

### Cotton Compresses and Gins

Ga., Hawkinsville—C. D. Davis, Planters Ginners, will probably rebuild burned plant.

Tex., Galveston—Cotton Concentration Co., W. Broadway, construct cotton warehouse, Plant D; \$45,000; R. E. Fristow, Ch. Engr., Galveston Wharf Co., in charge.

Tex., Goodnight—Vaughn Gin Co., capital \$20,000, incorporated; J. D. Vaughn.

### Drainage, Dredging and Irrigation

Alabama—U. S. Engr. Office, Mobile, soon start on plans for inland waterway through Baldwin County to connect Mobile Bay; probably call for bids early in October.

Florida—U. S. Engr. Office, Jacksonville, opens bids Oct. 8 for dredging approx. 525,000 cu. yd. material, place measurement, from relocation cut in Intracoastal Waterway, vicinity Matanzas Inlet.

La., New Orleans—Ocean Park Corp., 1019-18 Canal Bank Bldg., interested in developing Grand Isle, on Gulf of Mexico, 52 mi. from New Orleans, as all-year resort and bathing beach, requiring hydraulic dredging in Bayou Rigaud and making fills. See Want Section—Miscellaneous.

North Carolina—U. S. Engr. Office, foot of Front St., Norfolk, Va., has low bids for dredging in Inland Waterway between Currituck Sound and Albemarle Sound: (A) dredging to depth of 12 ft. at mean low water, approx. 546,582 cu. yd. and 147,464 cu. yd. overdepth, Lukens Dredging & Contracting Corp., Snow Bldg., Baltimore, Md., \$0.83 per cu. yd.; (B) dredging to depth of 13 ft. at MLW, approx. 394,046 cu. yd. and 155,992 cu. yd. overdepth, Delaware Dredging Co., 139 S. Third St., Philadelphia, Pa., \$0.077 per cu. yd.

Texas—U. S. Engr. Office, Galveston, has bid of \$74,532 from Linde Dredging Co., A. N. I. Bldg., Galveston (only bidder), for dredging Sabine-Neches Waterway, inner end Sabine Pass jetty channel over length of about 11,050 ft., and at junction Sabine Pass and Port Arthur Canal over length of 3900 ft., 292,500 cu. yd. place measurement from within specified limits, \$5,500 cu. yd. over depth.

Texas—U. S. Engr. Office, Galveston, let contract to Standard Dredging Co., Guaranty Bldg., Galveston, for dredging Louisiana and Texas Intracoastal Waterway, Port Arthur to point in Chambers County, near High Island; plans completed and specifications approved, for dredging portion of waterway from near High Island to Galveston Bay, near Port Bolivar and bids will be asked as soon as rights-of-way are secured.

Tex., Brownwood—James Spencer & Son Construction Co., Robert Burnham, P. O. Box 511, advises sub-contract received for Brownwood reservoir project of Brown County Water Improvement Dist. No. 1, includes cutting spillway and placing embankment and involves major portion of earthwork at approx cost of \$290,000; started work Aug. 13; equipment for dirt midway operations consists of 2 Osgood 1 1/4-yd. shovels, 1 Osgood 3/4-yd. shovel and 1 Lima "101" 1 1/4-yd. shovel, all gasoline powered; hauling equipment consists of 6 8-yd. crawler wagons with Caterpillar "60" power, 12 Model 120, 3-ton Indiana trucks, 3 Hug Model 87M trucks, 7 Ford trucks; completion scheduled for July, 1931; Standard Paving Co., Gen. Contr., Majestic Bldg., Fort Worth, and 2119 E. 11th St., Tulsa, Okla.

Va., Norfolk—U. S. Engr. Office, foot of Front St., let contract to Atkinson Dredging Co., 507 Florida Theatre Bldg., Jacksonville, Fla., at \$14,993, for dredging approx. 107,369 cu. yd. material, plus approx. 20,782 cu. yd. over depth, 128,151 cu. yd. measurement, Scotts Creek, Norfolk Harbor.

West Virginia—War Dept., Washington, allotted \$20,000 for removing shoals in lower Kanawha River.

### Electric Light and Power

Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.

Ala., Maxwell Field—Montgomery Electric Co., 12 N. Perry St., Montgomery, reported, has contract for electric distribution system.

Ark., Pine Bluff—Arkansas Power & Light Co., reported, plans expending \$375,000, transmission lines and improvements Woodward substation; install transformers, two

110,000 volt oil circuit breakers to take off a transmission line under construction from substation to Ouachita River nr. Hot Springs.

Kentucky—Public Utilities Development Co., Breslin Bldg., Louisville, E. Peet, Jr., advises have completed aerial survey of river and are now working on transit and level surveys incident to establishment of exact surface area of lake to be formed by construction of hydro dam on Chaplin River; plans beginning work in 1932; Utilities Engineering Co., Louisville, sister corporation of Kentucky Electric Development Co., both Breslin Bldg., will probably handle construction.

Ky., Ashland—Kentucky & West Virginia Power Co., M. C. Funk, Gen. Mgr., install white way along Winchester Ave., etc.

Ky., Ashland—Kentucky & West Virginia Power Co., reported, let contract to Walter H. Cox, Ashland, for equipment storage and distributing plant with service and repair depts.; cost \$70,000.

Missouri—Current River Power Co., Kansas City, reported, applied to Federal Power Comsn. for permission to construct power dams across Current River at Hargue Eddy in Ripley County, Mill Creek in Carter County and Blair's Creek in Shannon County.

Mo., Doniphan—Doniphan Hydro Electric Co., Doniphan, applied to Federal Power Comsn. for permission to construct dam north of here.

Mo., Sullivan—City, W. A. Fuller Co., Constr. Engr., 2916 Shenandoah St., St. Louis, construct electric plant; 35x50x18 ft.; install distribution system. See Want Section—Machinery and Supplies.

Oklahoma—Conservation Comsn. of State of Oklahoma, E. S. Elderman, Chrm., Oklahoma City, advises Grand Hydro Electric Co., Wash E. Hudson, Pres., Ritz Bldg., Tulsa, is at work on dam site on site of proposed hydroelectric plant on Grand River, drilling test holes for purpose of securing information to be submitted to prospective bidders when bids are asked for construction of dam.

Tex., Austin—City, reported, expend \$314,000 for improvements power plant; install two boilers, 900 h. p. capacity, each.

Tex., Crystal City—City, A. P. Hancock, City Mgr., votes Sept. 29 on \$128,863 power plant bonds.

Tex., Randolph Field—Kirkwood, Wharton & Lee, 523 N. Flores St., San Antonio, reported, have contract at \$18,171, for lighting installation.

Virginia—Bureau of Public Roads, Washington. See Want Section—Bids Asked.

Va., Martinsville—City, J. H. Pharis, Supt. Dept. of Electricity, improvements consist of increasing hydrostatic head, 6 ft. by means of crest gates on present dam and installing following equipment: 1250-kv-a. vertical generating unit with Smith Kaplan adjustable blade turbine; 375 kv-a. vertical generating unit with S. Morgan Smith fixed blade turbine; electric equipment furnished by General Electric Co., Schenectady, N. Y.; hydraulic by S. Morgan Smith Co., York, Pa.; crest gates, hoists, trash racks, etc., by Virginia Bridge & Iron Co., Roanoke; general construction work by B. F. Parrott & Co., Roanoke.

### Flour, Feed and Meal Mills

Tex., Cuero—Cuero Shelling & Feed Co., incorporated; V. J. Grunder.

### Garages and Filling Stations

Ala., Fort McClellan—U. S. Army, Construction Q. M., receives bids Oct. 12 for garage building; conc. found.; brick walls; comp. roof; cost \$45,000.

D. C., Washington—Fairfax Farms Dairy, 1620 1st St., N. W., reported, erecting 1 story, 65x108 ft., rein. concrete garage, 1621 Cooksey Pl.; A. D. Brown, Bldr., 4400 17th St., N. W.

Fla., Fort Pierce—Arch Taylor Service Station, Inc., chartered; T. A. Taylor.

Fla., Miami—C. E. Haley, Florida Press Bldg., Miami Beach, has contract for filling station Biscayne Blvd. and 11th Ave., for Orange State Oil Co., 368 N. E. 58th Terrace; rein. conc. and wall block; 38x66 ft.; 1 story building, 4 story tower; built-up and tile roof; Lester A. Amery, Archt., 308A Soybold Bldg.

Fla., Miami—Franklin Properties, Inc., J. F. Ireland, Pres., 815 Ingraham Bldg., reported, soon call for bids for garage and service station N. E. 2nd Ave. & 5th St.; John M. Bullen, Archt., 825 Lincoln Rd., Miami Beach.

Ga., Augusta—Branch & Smith, 316 Walker St., reported, has contract for garage for Edward Bros.; 1 story; 75x110 ft.; conc. found.; brick walls; comp. roof.

Ky., Russellville—Lashbrook Motor Co., capital \$22,000, incorporated; J. D. Lashbrook, R. R. Page.

La., Alexandria—C. M. Waters, Inc., Harris St., reported, constructing building 4th & Q Washington Sts., for service station; Standard Oil Co. and Cantrell's Garage, Lessees; E. Leo Ball, Archt., Haas Bldg.

La., Lake Charles—Frank Buick Co., Inc., 932 Bilbo St., chartered; Edwin Frank.

Md., Baltimore—Edw. J. Gallagher, Sr., 3501 Ednor Rd., construct filling station, Remington Ave., near 28th St.; Hercules Power Gasoline Co., J. C. Magness, 4100 Philadelphia Rd., Lessee.

Md., Baltimore—Geo. S. Weikert, care Seaboard Mtge. Co., Fidelity Bldg., construct ramp garage, 208 W. Fayette St.

Md., Baltimore—Harford Battery Service Co., 6408 Harford Ave., receiving bids for 1-story, conc. block, 34x31 ft. service station addition. Following bidders estimating: Charles C. Sanford, 2911 Berwick Ave.; Highland Construction Co., 1114 S. East Ave.; Wm. A. Alban, 5704 Harford Ave.

Md., Baltimore—John K. Culver, 102 Continental Bldg., construct filling station, Laurel and Pioneer Rd.; 1 story, 36x50 ft., conc. block; owner receiving sub-bids.

Md., Baltimore—Lord Baltimore Filling Stations, Inc., T. J. O'Connell, Engr., American Bldg. reported, construct filling station, York Rd. and Northway; brick; plans in progress.

Md., Baltimore—Stephen Seth & Co., Inc., 882 Park Ave., incorporated; Stephen Seth.

Md., Baltimore—Sun Oil Co., Haines and Water Sts., construct office, garage and warehouse at 1910 Russell St.; cost \$50,000.

Md., Baltimore—Thomas F. Leonard, 3615 Brehm's Lane, reported, has contract for service station Frederick Rd. and Caton Ave. and Eastern Ave. nr. Haven, for Sherwood Bros., Baltimore Trust Bldg.

Md., Baltimore—Traders Delivery Co., 719 Linden Ave., reported, let contract to Thomas Mullan, 3945 Greenmount Ave., for freight terminal, Hollins and Fremont St.; 1 story; brick; 170x100 ft.

Md., Hagerstown—A. K. Coffman, 40 E. Antietam St., reported, plans garage addition; brick; 2 story.

Mo., St. Louis—Brasin, Inc., incorporated; Henry W. Blodgett, 706 Bank of Commerce Bldg.

Mo., Trenton—McVay Motor Co., capital \$50,000, incorporated; Bowne McVay.

N. C., Greensboro—Standard Oil Co. of New Jersey, 26 Broadway, New York, construct service station 610 W. Market St.

N. C., Winston-Salem—Salem Steel Co., Vargrave St., reported, has contract for struc. steel for Standard Oil filling station, Main and First Sts.

Tex., Dallas—Franklin Motor Co., capital \$15,000, incorporated; W. E. Knighton, 724 S. Marlboro St.

### Gas and Oil Enterprises

Ala., Huntsville—Indian State Oil Co. of Oklahoma, J. W. Sappington, Pres., reported, plans erecting \$100,000 oil refinery; capacity 18,000 gal. daily.

Okla., Britton—Western Service Corp., Braniff Bldg., Oklahoma City, reported, granted natural gas distribution franchise.

Ky., Scottsville—Gas Engineering Corp., capital \$25,000, incorporated; Austin Gatlin.

Ky., Shelbyville—Shelby Oil Co. incorporated; Howard Pearce.

Ky., Winchester—Stockholders Cumberland Pipe Line Co. voted in favor of sale of company to Ashland Refining Co., Ashland; sale includes all of company's properties except those in Pulaski, Wayne and McCrory Counties, Ky.

Maryland—Public Service Comsn., Baltimore, approved application of Chesapeake Gas Co., Courtland St., Bel Air, for permission to construct gas distribution system in Harford and Cecil Counties; issuance by Chesapeake Co. of 250 shares without par value of its capital stock and acquisition of stock by National Public Utilities Corp., Lewis Bldg., Philadelphia, Pa., for \$20 per share.

Md., Baltimore—Consolidated Gas, Electric Light & Power Co., Lexington Bldg., applied to City Council for passage of ordinance authorizing erection steel, fireproof gas holder 307 ft. high, 182 ft. in diam. in Jones Falls Valley.



Miss., Seminary—Public Service Corp. of Mississippi, Frank K. McGehee, 5214 Vanderbilt St., Dallas, Tex., reported, has 25-yr. natural gas franchise.

Oklahoma—Stanolind Pipe Line Co., Philcade Bldg., Tulsa, reported, construct 285 miles loops between Headton, Okla., to Whiting, Ind., lay 90 miles 10-in. and 195 mile 12-in. pipe; increase capacity of trunk line at Whiting by 75,000 to 90,000 bbls. daily, at Carrollton, Mo., junction by 80,000 bbls. and at Freeman, Mo., by 90,000 to 125,000 bbls.; reported, placed orders for 35,000 tons pipe with A. O. Smith Corp., Milwaukee, Wis., Youngstown Sheet & Tube Co., Youngstown, O.; Republic Steel Corp., Youngstown, O., Spang, Chalfant & Co., Inc., Clark Bldg., and National Tube Co., Frick Bldg., both Pittsburgh, Pa.

Tenn., Knoxville—Superior Oil Co., capital \$25,000, incorporated; J. B. King, Deaderick Bldg.

Tex., Amarillo—U. S. Gov., Dept. of Commerce, Washington, reported, acquired 11,833 acres in southwest section Potter County for helium supply.

Texas—Atlantic Pipe Line Co., 260 S. Broad St., Philadelphia, Pa., advises contract for constructing crude oil line, Longview to Smith's Bluff, let to Mitchell-Stewart Construction Co.; Welding Engineering Co., Bartlesville, Okla., for electric welding; all pipe supplied by National Tube Co., Frick Bldg., Pittsburgh, Pa.; 2 electric pumping stations with General Electric equipment and Bryon Jackson centrifugal pumps. 9-17

Tex., Houston—United Gas System announced transfer of all properties and assets of Dixie Gulf Gas Co. to United Gas Public Service Co., principal operating subsidiary of United Gas Corp.; Dixie Gulf Gas Co. supplied gas to industrial consumers in Beaumont, Port Arthur and Houston and other points, has main pipeline system extending from Waskom compressor station in Waskom gas fields to Houston and Beaumont, also line from Waskom compressor station to Marshall.

Texas—Skelly Oil Co., Tulsa, Okla., reported, sold interest in recently completed natural gas pipe line from Texas Panhandle to Chicago to Natural Gas Co. of America. 9-3

Tex., Arp—Boone Refining Co. incorporated; L. F. Boone.

Tex., Dublin—N. T. Harbin, reported, has 25-yr. gas franchise; lay gas main to city limits.

Tex., Fort Worth—Petroleum Refractionating Corp., No. 2, capital \$25,000, incorporated; J. E. Vaeth, 3812 W. Seventh St.

Tex., Houston—Crescent Refining Co. incorporated; L. R. Hepworth, 1714 Daisy St.

Tex., Palestine—A. C. Watkins, reported, has contract for 2-mile all welded gas main to serve Alta Vista Montalba Highway, etc., connect with city distribution mains at Alta Vista.

Tex., San Antonio—Knight Refining Co., Inc., capital \$50,000, incorporated; J. W. Conger, Majestic Bldg.

Tex., Texarkana—Travers Crumpton, City Atty., reported, has negotiations under way for gas plant.

Tex., Tyler—Cameron Oil Co. incorporated; A. C. Cameron.

Tex., Tyler—C. and C. Drilling Co., capital \$50,000, incorporated; Gus J. Cormier.

Tex., Tyler—McLester Drilling Co., incorporated; Jerome McLester.

Tex., Wellington—City, W. W. Neeley, Mayor, voted \$65,000 bonds for purchase or erection gas distribution plant. 8-27

Va., Covington—Greenway & Kessinger, Covington, reported, have contract for constructing 9 meter stations for Columbus Gas Construction Co., temporary office, Charlottesville, subsidiary of Columbia Gas & Electric Co., 61 Broadway, N. Y. 3-12

### Ice and Cold-Storage Plants

Ala., Carrollton—Libby, McNeil & Libby, Tuscaloosa, reported, install \$10,000 cooling station.

Md., Baltimore—R. H. Bozman, Inc., has plans by Jas. R. Cox, 4547 Harford Rd., for addition to plant 1046 Granby St.; taks bids soon.

Tex., Amarillo—H. C. Badger, 1310 W. Sixth St., and Alex. Davidson, reported, erect \$50,000 ice and cold storage plant, 1001 Garfield St.; brick and tile; Harry M. Warren, Archt.

### Iron and Steel Plants

Okla., Tulsa—Sand Springs Home Interests, Sand Springs, reported, acquired properties of Tulsa Rolling Mills, Inc., Thompson Bldg.; plans operating.

W. Va., Wheeling—City Council, reported, approved deeding of grounds to Wheeling Steel Corp. for expansion to east of present Riverside works and section of river shore east of Walnut St. for expansion Ferry Works.

### Land Development

Ala., Gadsden—Dr. George S. Vann, reported, interested in developing Noccalula Falls property, 169 acres, for park.

Ark., Fayetteville—Appleby Bros., Inc., capital \$25,000, incorporated; George Appleby.

Fla., Monticello—Simpson Nursery Co., capital \$25,000, incorporated; C. A. Simpson.

Fla., Sarasota—C. H. Frahm, 6134 N. Washtenaw, Chicago, Ill., reported, acquired 10,000 acres Sarasota county; develop for colonization.

Md., Baltimore—Superior Kaolin Co., Inc., 901 Continental Bldg., incorporated; F. Fulton Bramble.

Mo., Ferguson, Ind. Br. St. Louis—Harry J. Tuthill, 102 S. Elizabeth St., acquired 200 acres south of Chambers Rd.

### Lumber Enterprises

Ala., Piedmont—Wallace Lumber Co., reported, rebuild burned plant.

Ala., Selma—Gooch Lumber Co., Montgomery, erecting hardwood lumber mill; capacity 40,000 ft. daily. 3-19

Arkansas—Earl Page, Little Rock, Commr. Mines, Manufacturers and Agriculture, negotiating with company for establishing veneer plant in State.

N. C., Hendersonville—Highland Lake Mill, Inc., capital \$50,000, incorporated; C. D. Woodward, J. W. Duff.

Tex., San Antonio—Alamo Lumber Co., 628 Buena Vista St., advises did not acquire entire properties of Richey-Kirby Lumber Co., acquired real estate and building at 2110 S. Flores St., and portion of merchandise stock; Richey-Kirby Lumber Co. will continue business in real estate and construction depts. 9-17

### Mining

La., Lake Charles—Lutcher & Moore Lumber Co., Orange, Tex., reported, leased to Texas Gulf Sulphur Co., 75 W. 45th St., New York, N. Y., lands; explore for sulphur; Texas Gulf Sulphur Co., Inc., advises are not developing sulphur deposits at Lake Charles.

Miss., Crystal Springs—Crystal Springs Sand & Gravel Co., capital \$50,000, incorporated; E. J. Traxler.

N. C., Asheboro—Randolph Gold Mining Co. incorporated; L. A. Rockwell.

N. C., Asheboro—Randolph Gold Mining Co., L. A. Rockwell, Indianapolis, Ind., W. R. Hunter, Chicago, Ill., and Asheboro; develop mine near Gray Chapel.

Tex., Abilene—Jones County Gravel Co., capital \$20,000; incorporated; Henry Sayles, Jr.

Tex., Gonzales—Coen Companies, Inc., 610 S. Bdwy., Los Angeles, Calif., and Box 154, Gonzales, reported, install additional crushing, grinding and other equipment; daily output 100 tons kaolin; develop 600-acre tract; removing equipment from California plant. 7-16

### Miscellaneous Construction

Ala., Mobile—Treasury Dept., Office of Supvg. Archt., Washington, let contract to Ernest Construction Co., Mobile, for boat basin, storage building, etc. 8-27

D. C., Washington—Following estimating on conc. cascades, walls, steps, etc., Meridian Hill Park, bids due Sept. 30, Public Buildings & Grounds Comsn., 1031 Navy Bldg.: Fred Drew Co., 2539 Pennsylvania Ave.; John J. Early, 2131 C St., N. W.; Chas. H. Tompkins Co., 1608 & St., N. W., and Spencer White & Prentiss, 14th and G St, N. W. 9-17

Florida—U. S. Engr. Office, Florida Theatre Bldg., Jacksonville, has low bid from McWilliams Dredging Co., Canal Bank Bldg., New Orleans, La., at approx. \$400,000, for 7 mi. levees and dredging channel in lake between Clewiston and Moore Haven. 9-10

Ky., Camp Knox—U. S. Dept. of Commerce, Bureau of Fisheries, Washington, D. C., reported, plans acquiring approx. 239 acres of Camp Knox reservation in Grahamton neighborhood for \$30,000 to \$40,000 fish hatchery.

Ky., Harrodsburg—War Dept., inviting designs by architects and sculptors for monument marking first permanent settlement in West; design to be subject to Fine Arts Comsn., Washington; Congress authorized \$100,000 expenditure.

Louisiana—Bd. of State Engrs., D. C. Daniel, Sec., 207 New Orleans Court Bldg., New Orleans, La., opens bids Oct. 9 for levees: Sampe-Westdale New Levee, Red River-Bayou Pierre Levee and Drainage Dist., Red River Parish, west bank, 23,811 ft. long, 5.3 ft. high, 108,000 cu. yd.; Montgomery Ferry South New Levee, 19th Louisiana Levee Dist., Natchitoches Parish, west bank Red River, 30,600 ft. long, 6.3 ft. high, 170,000 cu. yd.

La., New Orleans—U. S. Engr. Office, foot of Prytania St., let contract to Powell Bros., Georgetown, Miss., for Bonnet Carre Side Levees, Second New Orleans Levee Dist.; 10,000 cu. yd., \$0.23 per cu. yd.; 9000 cu. yd. \$0.25; 20,000 cu. yd., \$0.28. 8-27

La., New Orleans—U. S. Lighthouse Service let contract to Republic Creosoting Co., Water St., Mobile, Ala., at \$12,478 for 163,126 ft. creosoted piling and lumber.

Missouri—U. S. Engr. Office, 707 Postal Telegraph Bldg., Kansas City, let contract to C. W. Hunt Co., 177 S. Front St., Memphis, Tenn., at \$54,305, for 3300 lin. ft. pile clump dikes, Missouri River, Jackson and Missouri City Bends. 8-27

Mo., Bagnell—Union Electric Co., St. Louis, ordered by John H. Ross, State Game and Fish Commr., Jefferson City, to construct fish hatchery on Lake of the Ozarks; \$40,000 to \$50,000.

Mo., St. Louis—U. S. Engr. Office, 428 Customhouse, has low bid from M. A. Wogan, 511 Ry. Exch. Bldg., Kansas City, at \$51,060 for 3500 lin. ft. standard revetment, Missouri River, Dozier Bend, mile 47 to 50.

Mo., St. Louis—City, Bd. of Public Service, let contract to George Moeller Construction Co., 3520 Itaska St., at \$21,653, for crematory near 5300 Arsenal St.; 1 story, basement, 20x30 ft. 7-30

Mo., St. Louis—U. S. Engr. Office, Custom House, opens bids Sept. 28 for about 1500 to 4000 lin. ft. revetment, Missouri River, between miles 30 and 25 above mouth.

N. C., Chapel Hill—University of North Carolina recently let contract to T. C. Thompson & Bros., 609 N. Smith St., Charlotte, for dam; Dietrich Bros., 220 E. Pleasant St., Baltimore, Md., have contract for rein. steel; Atwood & Weeks, Engrs., Chapel Hill.

N. C., Fayetteville—City votes in December on \$65,000 bonds for building terminals on Cape Fear River; expenditure for wharves contingent on establishing 4-ft. channel in river, Wilmington Fayetteville.

Tenn., Chattanooga—U. S. Engr. Office has low bid from Osborne Drilling Corp., 3712 Grand Central Terminal Bldg., New York, at \$18,439, for diamond core drilling for subsurface investigations of foundations at 11 lock and dam sites, Tennessee River, between Riverton and Wilson Dam, Ala., and between Chattanooga and Knoxville, Tenn., Riverton Lock. 9-10

Tenn., Memphis—Memphis Harbor Comsn., Kenneth Markwell, Engr., asking bids for grading and sodding Mississippi River bluff between Hulling and Butler, involving \$12,000, to complete stabilization work from Harahan bridge to Talbot.

Tex., Beaumont—Port Comsn., Scott Shambaugh, Port Director, authorized calling for bids as soon as plans can be completed for 2 new cotton warehouses to cost \$60,000 and barge terminal at port; R. J. Cummings, Conslt. Engr., Houston.

Tex., Galveston—Supt. of Lighthouses, Customhouse Bldg., New Orleans, La., opens bids Oct. 1 for 610 ft. creosoted pile and timber bulkhead; material to be furnished by government.

Va., Cape Henry—U. S. Engr. Office, foot of Front St., Norfolk, has low bids for furnishing and placing riprap stone to prevent beach erosion in front U. S. Weather Bureau; 1002 short tons, more or less, Tunstall-Johnson Co., Inc., Citizens Bk. Bldg., Norfolk, \$4.25; 100 short tons, more or less, A. G. Pinkston & Co., 208 Essex Bldg., Norfolk, \$3.75.

W. Va., Marmet—U. S. Engr. Office, Coal Exch. Bldg., Huntington, opens bids Oct. 23 for Lock "B," Great Kanawha River; second lock of proposed twin locks opposite Marmet; includes land and guide walls only; Stoney gate valves with operating machinery for land wall only; miter gates with operating jacks and machinery complete for both sides of lock; oil, water and gas piping and electric conduits; all metal work; also temporary timber-crib dam extending from lower end of lower guide wall



of riverward lock to and across Chanoine weir of existing Dam No. 5 below; removal of section of this weir between temporary crib dam and abutment at end of weir; dredging to provide channel with bottom elevation of 555.0 for lower approach to new locks; removal of existing cofferdam; and possible construction, maintenance and removal of auxiliary cofferdam; also rein. conc. powerhouse on top river wall of Lock "A"; contract will be awarded as a whole to single contractor.

### Miscellaneous Enterprises

Fla., Fort Pierce—Atlantic Battery Mfg. Co., A. H. Stanton, Sec., advises plant complete for present output; no addition contemplated for several months. 9-17

Fla., Jacksonville—Wood Preservative Mfg. Co., J. P. McPherson, V. P., reported, construct plant at Commodore's Point; Roy A. Benjamin, Archt., 21 N. Ocean St.

Fla., Jacksonville—Jacksonville Steam Laundry Co. incorporated; E. W. Waybright, St. James Bldg.

Fla., Jacksonville—Revolving Piston Corp., incorporated; L. W. Harvey, 3923 Springfield Blvd.

Fla., Miami—Frank J. Bruen, 5632 Shendon St., Miami Beach, reported, plans improving Gables Racing Assn. track; build racing strip, etc.; expend \$500,000; George W. Langford Co., McAllister Hotel Bldg., Contr.; Paist & Steward, Archts., Art Center Bldg., Coral Gables.

Fla., Panama City—Panama Baking Co. incorporated; J. B. McCall.

Fla., Tampa—Monumental Cigar Co., incorporated; J. Andrews, 3004 Chaplin St.

Ga., Atlanta—Gilbert Beers, Bona Allen Bldg., Atlanta, reported, has contract for addition to plant of Liquid Carbonic Corp., McDaniel & Stephens Sts. 9-3

Ga., Columbus—Williams Lumber Co., 13th St., has contract for Tom Huston Peanut Co.'s addition; brick, steel and sheet iron; 80x170 ft.; conc. floors; cor. metal roof; used for storage, capacity 3500 tons peanuts; cost \$12,500; F. E. Golan Co., contract for steel; J. C. Russell Co., 1043 13th St., for sheet iron and metal work; balance of work by gen. contr.; install unloading, elevating and conveying mch. 9-17

Md., Baltimore—Maryland Baking Co., 317 N. High St.; expend \$150,000 for improving building Eutaw & West Sts.; will manufacture own equipment; plans by company's engineers; no major contracts let.

Md., Baltimore—United Construction Corp., 3925 Bonner Rd., incorporated; Morris Gresser, 2234 E. Baltimore St.

Md., Baltimore—Windsor Construction Corp., St. Lukes Lane near Windsor Mill Rd., incorporated; Charles R. Neeb.

Md., Hagerstown—Pangborne Corp., Crestline Ave. (Mfrs. sand blast and dust equipment), receives bids Sept. 29 for plant addition; Consolidated Engr. Co., 20 E. Franklin St., Baltimore, estimating.

Miss., Jackson—Bankers Credit Life Insurance Co., Birmingham, Ala., reported, consolidated with old Republic Life Insurance Co., Chicago, Ill.; continue operation in Mississippi under name Old Republic Credit Life Insurance Co.

Mo., Ellis—H. D. Barndollar, Olivia St., and W. L. Kepner, both Joplin, reported, construct asphalt plant; \$100,000; day labor.

Mo., Kansas City—Kansas City Folding Table Co., capital \$15,000, incorporated; H. P. Steen, 4954 Westwood Terrace.

Mo., Kansas City—Universal Building and Construction Co., incorporated; Louis Krantz, 424 Kirkpatrick Bldg., St. Joseph.

Mo., St. Louis—Ajax Corrugated Paper Co., Henry Gores, Pres., 1942 N. Second St., has building, Second and Mallinero Sts., for factory; cost, including equipment, \$20,000.

Mo., St. Louis—National Magnesia Co., Bernard Stevens, Mgr., 3904 Easton Ave., plants at Brooklyn, N. Y., and Chicago, leased warehouse space; plans expansion.

Mo., St. Louis—Norma Mfg. Co., Inc., E. T. Rosenblum, Mgr., 810 N. Sixth St., organized to manufacture automobile and aviation carburetors.

Mo., St. Louis—P-B Chain Mfg. Co., Inc., E. T. Rosenblum, Mgr., 810 N. Sixth St., organized to manufacture and assemble tire chains for trucks.

Mo., St. Louis—White Way Laundry, Inc., chartered; Jack R. Tucker, 3429 Hodiamont St.

N. C., Spindale—Jackson's Home Ice & Creamery, John L. Jackson, Pres., Tryon, let contract to York Ice Machinery Corp.,

York, Pa., for cold storage plant mch.; United Cork Co., Lyndhurst, N. J., for cork, cold storage doors, etc.; building of brick, cement; steel sash, etc. 9-10

N. C., Spring Hope—Nash County News, Inc., chartered; L. L. Davenport, Bybe R. Davenport.

Okla., Okmulgee—W. B. Pine, McCulloch Bldg., reported, completed negotiations for plant and property Interstate Glass Co., including 300 acres of Dolomite properties in Arbuckle Mts., nr. Bromide; remodel, install machinery for manufacture glass jars, bottles etc. 7-16

Okla., Oklahoma City—John J. Harden, Petroleum Bldg., Oklahoma City, reported, interested in establishing dehydrating plant of Royal Palm Dehydrating Co. in Market St.; Colfax Moulton, Mgr., Oklahoma public market, will be manager; use dehydrating process perfected by A. K. Purdy. 9-10

Tenn., Sparta—Dr. Pepper Bottling Co., 123 13th Ave., N., Nashville, advises nothing definite as to plant at Sparta. 9-17

Tex., Commerce—Commerce Coca Cola Bottling Co. incorporated; Charles F. Ashcroft.

Tex., Corpus Christi—Southern Alkali Corp., Hugh A. Galt, Pres., 535 Fifth Ave., New York, reported, begin construction by first of 1932 on \$10,000,000 first unit of chemical plant. 7-23

Tex., Dallas—Cal-Tex Construction Co., capital \$100,000, incorporated; A. G. McAdams, 5122 Gaston St.

Tex., Galveston—M. Jeff Tiernan, 2224 D St., reported, rebuild fire damaged building, 23rd and Market Sts.

Tex., San Antonio—O. L. Biedenbarn, 212 Market St., Shreveport, La., reported, acquired Coca Cola Bottling Co.; incorporated San Antonio Coca-Cola Bottling Co., Inc., will operate.

Va., Norfolk—Planters Chemical Corp., capital \$50,000, incorporated; Harry L. Bell, Broad Creek Road.

Va., Norfolk—Hampton Roads Shipbuilding Co., Inc., H. B. Spear, V. P. & Gen. Mgr., reported, plans reconstructing burned 800 ft. warehouse, mold loft; recondition mch.; E. E. Gann, Union Trust Bldg., Washington, principal owner.

Va., Winchester—H. J. Heinz Co., Pittsburgh, Pa., completed generator building and addition to tank building and 40 storage tanks at vinegar plant; erecting sprinkler tank; may later erect bottling plant. 4-23

W. Va., Huntington—Chapman Printing Co., capital \$25,000, incorporated; O. K. Chapman, G. B. Melton.

### Motor Bus Lines and Terminals

Ark., Fayetteville—Ernest Smith, granted permission by State Railroad Comsn., Little Rock, to operate inter-state freight line from Tulsa, Okla., to Fayetteville, Rogers, Siloam Springs, Springdale, etc.

Fla., St. Petersburg—Florida Motor Lines, Inc., 6411 First Ave., N. T. B. O'Steel, Traffic Mgr., reported, has site, 108 Central Ave., for union bus depot; will raise present building; erect conc. and steel bldg.; Hadley & Nordstrum, Archts., 356 Central Ave.; \$35,000.

Ga., Atlanta—Flagler Co., Red Rock Bldg., constructing a bus terminal, Carnegie Way and Spring St., to be occupied by South-eastern Greyhound Lines, Lessee; Asa G. Candler, Inc., Candler Bldg., Owners. 8-6

Tenn., Nashville—Nashville-St. Louis Motor Express, Inc., chartered; Rich, Gleaves, 513 Fairfax Ave.

Tex., Abilene—Page Way Coaches, Inc., capital \$100,000, incorporated; George W. Page.

Tex., Houston—Brown Brothers Freight Forwarding Co., Inc., chartered; H. P. Brown 507 Welch St.

### Railways

Kv., Louisville—Louisville & Nashville R. Co., H. T. Shanks, Gen. Pur. Agt., reported, may purchase 50,000 tons rail.

La., Shreveport—Texas & Pacific Ry. Co., E. F. Mitchell, Ch. Engr., Texas & Pacific Bldg., Dallas, Tex., advises company has no plans for rebuilding line between Shreveport and Lucas; right-of-way acquired, but it is not known when construction will be considered. 8-20

Mo., St. Louis—Southern Pacific Co., P. Shoup, Pres., San Francisco, Calif., acquiring St. Louis Southwestern Ry. Co., D. Upthegrove, Pres., St. Louis, through exchange of stock, subject to approval of Interstate Commerce Comsn., Washington; sufficient stock deposited to meet requirements.

Mo., St. Louis—Missouri Pacific R. R. Co., L. W. Baldwin, Pres., ordered 30-ton gasoline-driven locomotive from Plymouth Locomotive Works, Plymouth, Ohio.

Va., Richmond—Chesapeake & Ohio Ry. Co., H. C. Pearce, Dir. Pur. and Stores, Cleveland, Ohio, inquiring for 30,000 tons rail.

### Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

#### Proposed Construction

D. C., Washington—Office of Executive Officer, Arlington Memorial Bridge Comsn., Navy Bldg., has low bid from Corson & Gruman, 33rd and K Sts., N. W., at \$82,468 for paving, curbs, sidewalks, etc., on and around bridge plaza east end Arlington Memorial bridge. 9-10

Ga., Rome—Floyd County Bd. of Roads and Revenues widen, build conc. shoulders, change bridge, Silver Creek, Lindale-Rome-Cedartown road.

Kentucky—State Highway Comsn., H. D. Palmore, Engr., Frankfort, reported, plans 30 mi. London-Hyden road, Laurel County line via Garrard to Huden, Leslie County; to be undertaken during next 6 months.

La., Jennings—City considering street paving.

La., Shreveport—Capt. Geo. E. Lamb, Constructing Quartermaster, Barksdale Field, completed plans for \$400,000 road system; call for bids when plans are approved in Washington.

LOUISIANA—State Highway Comsn., O. K. Allen, Chmn., Baton Rouge, opens bids Sept. 29 for grading and surfacing with gravel 10 roads in following parishes:

Pointe Coupee—2.7 mi., Waterloo-Hermitage Levee Highway, Route 30, Proj. A-36;

West Baton Rouge Parish—3.3 mi., Arbroth-Alford Levee Highway, Route 135, Proj. A-38; 4.4 mi., Chamberlin-Lobdell Levee Highway, Route 30, Proj. A-40; 1.8 mi., Port Allen-Brusly Levee Highway, Route 30, Proj. A-41; 3.3 mi., Missouri Bend Levee Highway, Route 30, Proj. A-42;

Iberville—4.4 mi., St. Gabriel Levee Highway, Route 63, Proj. P-42;

Ascension—1.1 mi., Darrowsville Levee Highway, Route 1, Proj. P-43;

Avoyelles-St. Landry—1.1 mi., Woodside Levee Highway, Proj. RRA-10, Route 824;

St. Landry—0.9 mi., St. Joseph Levee Highway, Route 824, Proj. RRB-11; 0.8 mi., Bayou Current Levee Highway, Route 824, Proj. RRA-12.

Louisiana—See Bridges, Culverts and Viaducts.

La., Shreveport—City Comsn. Council opens bids Oct. 6 for paving extension of Milam St.; probably use asphaltic conc.

MARYLAND—State Roads Comsn., L. H. Stuart, Sec., Baltimore, has low bids for 5 roads and bridge in following counties and in Baltimore City:

Baltimore City—0.22 mi. sheet asphalt, Mr. Royal Ave., BC-109-72, National Paving & Contracting Co., Menlo Drive and Western Maryland R. R., Baltimore, \$21,593;

Harford—struc. steel superstructure for bridge over Deer Creek, Hickory to Ady road, H-126-44, Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa., \$6700;

Talbot—1.36 mi. conc., Cordova-Easton road, T-44-24, Phillips Bros., Salisbury, \$27,741;

Washington—0.84 mi. macad., Dry Run to Pennsylvania state line, W-100-62, Bester-Long Co., 441 S Potomac St., Hagerstown, \$14,373;

Wicomico—4.58 mi. penetration slag macad. resurfacing, Layfield & Waller Paving Co., Salisbury, \$56,318;

Worcester—1.0 mi. conc., Snow Hill-Whitton road, Wo-103-14, Phillips Bros., Salisbury, \$19,927. 9-10

MARYLAND—State Roads Comsn., L. H. Stuart, Sec., Baltimore, opens bids Sept. 29 for 4 roads and 3 bridges in following counties:

Montgomery—1.03 mi. macad., Diamonds Corner to Galtersburg-Quince Orchard road toward Old Germantown, M-183-54; single span, conc. slab bridge, road from Wheaton to Four Corners over Silgo Branch, M-179-37; double span, conc. slab bridge, road from Glenmont to Colesville over Northwest Branch, M-80-37;

**Prince George's**—2.17 mi. gravel, Croom road, and Cont. P-101 to Rock Creek, P-167-82; 0.51 mi. conc., through Maryland Park, Central Ave. to District of Columbia line, P-176-32; double span, conc. girder bridge, road from Mt. Rainier to Queen's Chapel road on Prospect Ave. over Northwest Branch, P-191-37;

**Worcester**—1.0 mi. conc., Berlin-Liberty-town road, end Wo-90 toward Wicomico County line, Wo-104-12.

**Mississippi**—State Highway Comsn., C. M. Williamson, Dir., Jackson, opens bids Oct. 13 for 2 mi. grading, Highway 22 between Collins and Laurel, Covington County, 7000 cu. yd. excavation, 1000 cu. yd. borrow excavation.

**Mo., St. Louis**—City, Bd. of Public Service, City Hall, opens bids Oct. 13 for 15 paving projects to cost approx. \$218,000.

**NORTH CAROLINA**—State Highway Comsn., Leslie R. Ames, Engr., Raleigh, has low bids for 4 roads and bridge, totaling \$365,511, in following counties:

**Chowan**—12 mi. 9-ft. asphalt to 18 ft. north of Edenton to connect with Proj. 1142, No. 1131, R. G. Lassiter & Co., Raleigh Bank & Tr. Bldg., Raleigh, \$110,231;

**Brunswick**—9.44 mi. grading, shoulders and sand asphalt, Route 30, No. 3201, Southern Paving Construction Co., Vol. Life Bldg., Chattanooga, Tenn., \$140,591;

**Durham**—5.135 mi. conc., Route 751, No. 4161, Carolina Contracting Co., 1112½ Taylor St., Columbia, S. C., \$93,664;

**Alamance**—bridge, Route 10, No. 5050, Cobbs and Homewood, Chapel Hill, \$4854;

**Watauga**—1.879 mi. grading, draining, Route 60, No. 7740, W. H. Anderson Construction Co., Asheville, \$16,169. 9-10

**N. C., Raleigh**—State Highway Comsn., E. B. Jeffress, Chmn., authorized purchase of highway machinery to cost \$200,000.

**Okla., Tulsa**—City, George Watkins, Mayor, plans opening Rosedale Ave. and widening Quannah Ave.

**S. C., Bamberg**—City plans new street through business section.

**TENNESSEE**—State Dept. of Highways and Public Works, R. W. Baker, Commr., Nashville, opens bids Oct. 2 for paving 6 roads, involving \$500,000, in following counties:

**Hamilton**—5 mi., between Bachman Tunnel and Georgia state line, Highway 8, FAP 221-A;

**Davidson**—4 mi. State Highway 11, between Nashville city limits and station 209-00 (Dickerson Pike), FAP 253-A;

**Williamson**—7 mi., State Highway 11, FAP 256, between Nolensville and Triune;

**Lauderdale**—5 mi., State Highway 19, between Ripley and Arp, FAP 257;

**Monroe**—1.2 mi., State Highway 2, through Sweetwater, FAP 258;

**Washington-Carter**—3.87 mi., State Highway 36, between Johnson City and Unicoi County line, FAP 259.

**Tex., Amarillo**—City expend \$250,000 for paving; City Comsn. approved 15 petitions.

**Tex., Dallas**—City, John N. Eddy, City Mgr., start work in October on S. Lamar and Olive-Phelps street projects; drawing plans for paving widened portions Ross Ave. and N. Akard St.

**W. Va., Huntington**—City Comsn. has low bid from A. A. Bostic, 507 Bridge St., at \$24,782, for city's share of super-highway westerly to Big Sandy River; R. W. Breece, City Engr. 9-10

#### Contracts Awarded

**Ark., Fort Smith**—Sebastian County, S. A. Lynch, Judge, plans conc. paving 8 additional blocks, Wheeler Ave.; property owners and city to furnish materials and County supply workmen.

**D. C., Washington**—Dist. Commrs., Dist. Bldg., let contract to Roy D. Schlegel, 1734 Conn. Ave., N. W., for grading Reservoir Rd., N. W.

**Florida**—State Road Dept., Robt. W. Bentley, Chmn., Tallahassee, let contracts to Roquemore Gravel Co., Montgomery, Ala.; American Petroleum & Transport Co., Atlanta, Ga., and John E. Ballinger, Lakeland, for furnishing road construction materials. 9-3

**Tex., Bryan**—City, R. G. Williams, City Mgr., let contract to Thurber Construction Co., Fort Worth Natl. Bldg., Fort Worth, at \$27,701, for 15,282 sq. yd. rein. conc. pavement, 9-6-9, 20 ft. grading, storm sewer inlets, etc.; V. J. Head, City Engr.

**Tex., Corsicana**—City Commrs. let contract to F. P. McElwrath Construction Co., at \$28,530, for 4 blocks paving.

## Sewer Construction

**Sewer Construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.**

**D. C., Washington**—See Want Section—Bids Asked.

**D. C., Washington**—W. A. Pate, Evans Bldg., has contract at \$13,247, for storm water sewer Tuckerman St. and Luxon Ave.

**Ky., Louisville**—See Want Section—Bids Asked.

**La., New Orleans**—Westinghouse Electric & Mfg. Co., Pittsburgh, Pa., reported, low bidders for pumping plant motors for Sewerage and Water Board. 9-3

**Md., Baltimore**—N. Martel, 4400 Veste Ave., reported, low bidder at \$40,880, for sewers, Sanitary Contr. 289. 9-10

**Miss., Vicksburg**—City submitted plans to Major T. B. Larkin, Dist. Engr., for constructing 12-in. pipe line over Mississippi River levee at foot of Belle Aire St.

**N. C., High Point**—See Want Section—Bids Asked.

**Okla., Oklahoma City**—City, L. M. Bush, Engr., having plans prepared for \$100,000 sanitary sewer.

**Tex., Dumas**—City, reported, begin work soon on \$70,000 sewer system; Panhandle Construction Co., Lubbock, previously noted contr. 5-21

## Telephone Systems

**Md., Fullerton**—Following contractors estimating on building, Chesapeake & Potomac Telephone Co., Baltimore, Lessee: State Properties Co., 215 N. Calvert St., Franklin Real Estate & Finance Co., 205 W. Franklin St., Thos. Mullan, 3945 Greenmount Ave.; Edw. J. Winkler, Va. Ave., all Baltimore.

**Md., Rockville**—Chesapeake & Potomac Telephone Co., reported, plans installing battery equipment.

**Tex., Spearman**—Western Telephone Corp. granted 25 yr. telephone franchise; install common battery service.

## Textile Mills

**Miss., Starkville**—Charles Bell & Sons, Kosciusko, reported, has contract for 90 ft. addition for J. W. Sanders Cotton Mill, Inc.

**N. C., Asheboro**—Clyde Wood, Asheboro, general contractor for Cetwick Mills project, let contract to G. G. Ray & Co., 311 E. Fifth St., sheet metal and roofing; Bright-Brooks Lumber Co., Builders Bldg., lumber, both Charlotte; E. O. Rich, Asheboro, brick; Southern Engineering Co., Little Pittsburgh, Charlotte, steel. 9-10

**N. C., Ronda**—Hamilton-Wilco Mills, Inc. (Cotton), Dr. J. W. Choate, reported, plans re-opening mills; may erect addition doubling plant capacity. 9-17

**N. C., Stoney Point**—Adell Yarn Mills, Inc., W. H. Suttentfield, Treas., organized to take over plant of Adell Mfg. Co.; no major improvements to be made at present time.

**S. C., Lyman**—Gallivan Const. Co., Gallivan Bldg., Greenville, has contract for \$500,000 addition for Pacific Mills; Lockwood Greene Engineers, Inc., Montgomery Bldg., Spartanburg. 9-10

**Tenn., Knoxville**—Standard Knitting Mills, E. J. Ashe, V.-P., erecting 1 story addition, Washington Ave. and Mitchell St.; install cutting and finishing machinery.

**Tenn., Shelbyville**—Woolsey Knitting Mills, H. L. Woolsey, reported, started work on superstructure for 1 story addition; 125x125 ft.

**Va., Goshen**—Stillwater Worsted Mills, Harrisville, R. I., with Southern plants, Goshen, Augusta Springs and Craigsville, reported, let contract to Harrisonburg Building & Supply Co., Harrisonburg, for constructing addition to dye plant at Goshen.

## Water Works

**Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that Classification.**

**D. C., Washington**—W. C. Briddell Co., Inc., Drivers & Mechanics Natl. Bk. Bldg.,

Baltimore, Md., has contract for reservoir Stanton Park. 9-3

**Fla., Hollywood**—Layne Southeastern Co., Seaboard Air Line Bldg., Norfolk, Va., reported, submitted proposal to city for construction \$125,000 water plant with 2,000,000 gal. daily capacity; asked for 30 yr. franchise; Hollywood, Inc., Leon C. Herrick, Pres., reported, offered site for plant. 10-2-1930

**Fla., St. Augustine**—Fairbanks, Morse & Co., Chicago, Ill., reported, has contract for automatic electric pump to be installed at water works.

**Ky., Lawrenceburg**—City, E. W. Ripey, votes Nov. 3 on \$40,000 water bonds. 9-17

**Ky., Owingsville**—City votes Nov. 3 on \$13,000 water bonds.

**La., New Orleans**—Dixie Mill Supply Co., Inc., 901 Tchoupitoulas St., New Orleans, reported, low bidder for furnishing approx. 20 tons 4-in. c. i. pipe.

**Miss., Ellisville**—City Clerk receives bids Oct. 6 for boring water well.

**Mo., Maysville**—City voted \$50,000 bonds for water plant; W. B. Rollins & Co., Engr., Kansas City.

**Mo., St. Clair**—Dunbar-Simon, Inc., 7514 Buckingham Drive, Clayton, has contract for \$25,000 water works; 21,000 ft. of 4, 6 and 8-in. c. i. pipe; McWane Cast Iron Pipe Co., Birmingham, Ala., and Mueller Co., Decatur, Ill., Equip. Contrs.; W. F. A. Fuller, Engr., 2900 Shenandoah St., St. Louis. 9-17

**N. C., Elizabeth City**—Atlantic Bridge Co., Inc., Jefferson Bldg., Greensboro, reported, has contract for dam across Knobb's Creek for Public Utilities Comsn.; commission to furnish steel; \$15,000 available.

**Okla., Okarche**—Humphrey & Thomas, Omaha, Neb., reported, has contract for \$44,000 water works; Milliken & Whitneck, Const. Engrs., S. W. Natl. Bldg., Oklahoma City.

**Tenn., Nashville**—See Want Section—Bids Asked.

**Tenn., Nashville**—Smith Federal Sales Corp. has contract for installing two 24-in. cut-off gate valves.

**Tex., Alice**—City issue \$10,000 bonds for water works. 8-27

**Va., Yorktown**—Lynchburg Pipe & Foundry Co., Lynchburg, reported, has contract for 320 tons, 6 and 8-in. bell spigot, water system, Dept. of Interior; Virginia Engineering Co., 1st Natl. Bank Bldg., Newport News, Gen. Contr. 7-30

**W. Va., Huntington**—Graver Tank & Mfg. Corp., East Chicago, Ind., has contract for installation of Zeolite water softening system at Veterans' Administration Hospital. 8-6

## Woodworking Plants

**N. C., Marion**—Marion Veneer & Panel Co. will repair burned panel room.

**Tex., El Paso**—Merger, reported, under way of Hoyt Furniture Co., 109 San Francisco St., with Rogers Furniture Co., 209 N. Stanton St.

## FIRE DAMAGE

**Ala., Piedmont**—Wallace Lumber Co.'s plant; loss \$25,000.

**Ark., Booneville**—C. H. Hodges Lumber Co. sheds, warehouse owned by W. R. Bevins; loss \$35,000.

**Ark., Newport**—City Meat Market, operated by C. W. Reeves; A. Bowie Grocery; loss \$8000.

**Ark., Searcy**—J. W. Barron's residence; grocery, filling station, garage; loss \$11,000.

**Ga., Hawkinsville**—Planters Ginnery, operated by C. D. Davis.

**Ga., Jackson**—Warehouse of Standard Oil Co. and office and plant H. F. Gilmore Lumber Co.

**Ga., Metter**—Kingery live stock sales stables; Standard Service Station; Wilkinson's Blacksmith Shop; additional bldg.; loss \$15,000 to \$20,000.

**Ky., Mt. Sterling**—Albert F. Wyatt's residence, Lubegrud Pike near Mt. Sterling; loss \$10,000.

**La., Bunkie**—Cottonport Gin, owned by Union Oil Co.; loss \$15,000.

**La., Pineville**—John Ball's residence, Riverside Drive; loss \$10,000.

**Md., Annapolis**—Dance hall, 6 bowling alleys and store, Crystal Beach, Magothy River, about 10 miles from Annapolis, James Donnelly, owner; loss \$22,000.



Miss., Jackson—Coopers Well Hotel, off Jackson-Raymond Highway; Mrs. Pat Spengler, owner.

Mo., Bethany—Grandstand and liberal arts bldg., Northwest Missouri State Fair Grounds; loss \$30,000.

Mo., Kansas City—Residences of Irving H. Hills, 6150 Sni-a-Bar Rd., and A. R. McDonnell, 7115 Sni-a-Bar Rd., Eastwood Hills; loss \$9000.

N. C., Asheville—Magistrate Enoch S. Morgan's residence, Woodfin industrial section.

N. C., Marion—Panel room of Marion Veneer & Panel Co.

Okla., Guthrie—Logan County School in Dist. No. 77, 10 miles from Guthrie. Address School Bd.

S. C., Alcolu—Planing mill and dry kilns of D. W. Alderman & Sons Lumber Co.; loss \$200,000.

S. C., Spartanburg—Silver's 5- and 10-cent store, E. Main and Broad Sts.; loss about \$14,000.

Tex.; Dallas—Dynamite storage house of E. I. du Pont de Nemours Co.; loss \$25,000.

Tex., Dallas—Portion of building of Christian Advocate Publishing Co. and Christian Courier office; loss \$50,000.

Tex., Elmina—Walker County Lumber Co.'s plant; loss \$100,000.

Tex., Palestine—Old Elks Club Bldg., occupied by Palestine Town Club and 3 stores.

Va., Hamilton—Miss May Compner's barn near Hamilton; loss \$6000.

Va., Norfolk — Main warehouse shed of Hampton Roads Shipbuilding Co., Inc.; loss \$20,000; pier owned by Pennsylvania Railroad, loss \$250,000.

Va., Staunton—Woodwards Cleaning & Dyeing Works.

La., Alexandria—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., selected Edw. F. Neild, City Natl. Bk. Bldg., Shreveport, as architect for \$275,000 post office. 8-20

Md., Fort George G. Meade—Constructing Quartermaster opens bids Oct. 12 for 3 field, 9 company and 8 non-commissioned officers' quarters; bldgs. were partially completed under another contract.

Miss., Biloxi—U. S. Veterans Bureau, Arlington Bldg., Washington, completed tentative plans for \$800,000 to \$1,000,000 home for disabled volunteer soldiers; probably call for bids in December; whitewashed brick, screened porches, slate or moss colored shingle tile roof; smaller houses for officers and staff members to be frame. 4-16

Miss., Lumberton—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., has low bid at \$70,200 from Jos. McCarthy & Sons, Pana, Ill., for post office. 6-11

N. C., Charlotte—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, about completed working drawings for \$525,000 post office addition. 3-5

S. C., Cheraw—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, selected Wilson & Tatum, Central Amer. Bldg., Columbia, S. C., as architects for Federal Bldg. 7-30

Tenn., Johnson City—Prospective estimators on hospital addition, connecting corridor and barrack bldg., Soldiers' Home, bids Oct. 6 by Veterans' Administration, Arlington Bldg., Washington; On Hospital—James I. Barnes, Logansport, Ind., and Springfield, O.; R. S. Blome Co., First Natl. Bk. Bldg.; Henry B. Ryan Co., 500 N. Dearborn St.; Carl Westburg & Co., 6234 S. Oakley Ave.; Krah Construction Co., 350 W. Clark St.; L. Balkin Co., 1850 W. Austin Ave., all Chicago, Ill.; Shepard Elevator Co., 2413 Colerain Ave., Cincinnati, O.; Hughes-Foulkrod Co., Schaff Bldg.; Theriault Contracting Co., 534 E. Johnson St., Philadelphia, Pa.; Adams Construction Co., Woodward Bldg., Washington; Ward & Ward, 57 Capitol City Bk. Bldg., Charleston, W. Va.; Murch Bros. Construction Co., Ry. Exch. Bldg.; Sodemann Heat & Power Co., 2300 Morgan St.; Wm. MacDonald Construction Co., 1311 Synd. Trust Bldg., both St. Louis, Mo.; Algernon Blair, First Natl. Bk. Bldg.; Samford Bros., 301 Washington Ave., both Montgomery, Ala.; Joe B. Martin, 211 Kinney Bldg.; J. A. Jones Construction Co., Commr. Bk. Bldg., both Charlotte, N. C.; Broome Electric Co., P. O. Box 1472, Amarillo, Tex.; Marshall Construction Co., C. O. Biddle, Beeler & Co., Inc., all Johnson City; Emory Construction Co., Empire Bldg.; J. M. Dunn & Son, 245 Broad St.; Worsham Bros., Empire Bldg., all Knoxville, Tenn.; Yeager & Sons, Danville, Ill.; Murphey Pound, Box 422, Columbus, Ga.; Virginia Engineering Co., Inc., First Natl. Bk. Bldg., Newport News, Va.; Jewell-Riddle Co., Inc., Sanford, N. C.; North-Eastern Construction Co., Nissen Bldg., Winston-Salem, N. C.; Smallman-MacQueen Construction Co., Inc., 1109 Fifth Ave. S.; Mason & Dullon, 3024 Third Ave., both Birmingham, Ala.; W. P. Thurston Co., Inc., 301 S. Fourth St., Richmond, Va.; Elliott Building Co., Hickory, N. C.; Angle-Blackford Co., Amer. Bk. Bldg., Greensboro, N. C.; J. M. Clayton Co., 78 Simpson St., N. W., Atlanta, Ga.; Frank P. Boyd, 1018 Lafayette Ave., Columbus, Ind.; W. H. Bond Co., Inc., Raleigh, N. C.; Orr-Barnes Construction Co., Rogers & Leventhal, Inc., Box 173, both Chattanooga, Tenn.; G. C. Johnson Construction Co., Welch, W. Va.; A. H. Gulon, Inc., 256 W. Main St., Gastonia, N. C.; Boone, Eason & Wood, Inc., Bluefield, W. Va.; Angle-Blackford Co., 18th Ave., N., Nashville, Tenn.; Krah Construction Co., 350 N. Clark St., Chicago, Ill.; D. J. Phipps, 212 Main St., Wasena, Roanoke, Va.; Atlantic & Gulf Construction Co., Box 931, Jacksonville, Fla.

Estimating on other bldgs.: O. M. Gwin Construction Co., 3509 Fern St., New Orleans, La.; Wm. A. Miller Machine & Elevator Co., 920 N. Main St.; Roach-Lecon-tour Construction Co., 102 N. Broadway, both St. Louis; Shepard Elevator Co., 2314 Colerain Ave., Cincinnati, O.; Kimball Bros., Council Bluffs, Iowa; Salem Foundry & Machine Works, Salem, Va.; A. Kleckhefer Elevator Co., 1026 St. Paul Ave., Milwaukee, Wis.; Otis Elevator Co., Atlanta, Ga.; Warner Elevator Manufacturing Co., Cincinnati, O.; Haughton Elevator & Machine Co., Toledo, O.; Moffatt Machinery & Manufacturing Co., Charlotte, N. C.; American Elevator & Machine Co., 500 E. Main St., Louisville, Tenn.; A. R. McMurry, 425 W. Clinch Ave.; Warner Service Co., 102 W. Clinch Ave., both Knoxville, Tenn.; Ray A. Phelps, Beloit, Wis.; Electrical Supply Co., Johnson City; Jones-Cornett Electric Co., Welch, W. Va.; Chas. E. Mumford, 6 Locust Ave.,

## BUILDING NEWS

### BUILDINGS PROPOSED

#### Association and Fraternal

La., Shreveport—Mithra Grotto, Ruvian D. Hendrick, Monarch, may erect temple.

#### Churches

Mo., St. Louis—Temple Israel, Kingshighway and Washington Blvd., razing bldgs. on site for \$225,000 religious school bldg.; Greek, 25 classrooms, library, auditorium; drawing plans.

N. C., Raleigh—West Raleigh Presbyterian Church, Rev. J. Joseph R. Walker, Pastor, plans bldg., Horne St. and Clark Ave., Fairmont.

#### City and County

Md., Cambridge—Dorchester County Bd. of Commrs., Edwin S. Lake, Sec., Bldg. Comm., opens bids Oct. 5 for \$75,000 court house remodeling and addition; brick and stone, 2 stories, fireproof conc. vaults; Wm. F. Stone, Archt., 2612 N. Charles St.; Henry Adams, Mech. Engr., Calvert Bldg., both Baltimore. Following contractors estimating: Chas. E. Brohawn & Bros.; Mowbray & Tyler, both Cambridge; J. Russell Summers, Easton; Goode Construction Co., Annapolis; Century Construction Co., Hearst Tower; L. L. Chambers, Inc., 36th St. and Roland Ave.; Cogswell Construction Co., 406 Park Ave.; all Baltimore; Little Construction Co., Builders Bldg., Charlotte, N. C. 6-18

Mo., Houston—Texas County votes in special election Oct. 6 on \$25,000 court house completion bonds. 5-21

Mo., St. Louis—City, Bd. of Public Service, City Hall, opens bids Oct. 13 for Engine House 43, Letting 5362.

Tex., Lampasas—City, J. C. Abney, Mayor, open bids about Oct. 1 for \$25,000 city hall. 8-27

#### Dwellings

Ga., Atlanta—Dr. Benj. T. Carter, Med. Arts Bldg., plans brick residence, Habersham Rd.; conc. foundation, hardwood and tile floors; archt. not selected.

Ga., Columbus—Mrs. E. W. Phillips, 1216 Shepherd Ave., has low bid from Williams Lumber Co., Inc., 13th St., for residence; T. Firth Lockwood, Archt., 211 Murrah Bldg. 8-20

Ga., Sea Island Beach—R. H. White, care Southern Wood Preserving Co., East Point, erect \$10,000 residence; stucco and hollow tile, hardwood floors, conc. foundation, tile roof; Francis L. Abreu, Archt., Brunswick.

Okla., Sand Springs—C. A. Hubbard erect stone residence; 2 stories, 40x65 ft.; J. D. Forsyth, Archt., Exch. Bk. Bldg., Tulsa; drawing plans.

Va., Williamsburg—Marston Christian has low bid from T. A. Painter, Williamsburg, for residence; L. P. Hartsook, Archt., Amer. Natl. Bk. Bldg., Richmond. 9-10

#### Government and State

Ala., Fort McClellan, Anniston—Constructing Quartermaster opens bids Oct. 12 for garage; \$45,000 available.

Ala., Greenville—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids Oct. 12 for post office, etc.; drawings from office Supvg. Archt.

Ala., Maxwell Field, Montgomery—Prospective estimators on \$20,000 stable, bids Sept. 28 by Constructing Quartermaster: Smith-Pew Construction Co., 435 Irwin St., land St., Charlottesville, Va.; Roach-Lecon-N. E., Atlanta, Ga.; C. E. King, 1009 Wert-tour Co., First Natl. Life Bldg., Broadway and Chestnut St.; Johns-Manville, Locust and 17th Sts., both St. Louis, Mo.; All States Construction Co., Inc., 305 Bisbee Bldg., Jacksonville, Fla.; A. J. Honeycutt Co., 2512 Eighth Court, North; Smallman-MacQueen Construction Co., 1109-15 Fifth Ave., both Birmingham, Ala.; Batson-Cook Co., Inc., West Point, Ga.; Algernon Blair, First Natl. Bk. Bldg., Montgomery, Ala.; Wm. Grohne Co., 11719 S. Bluff St., Joliet, Ill.; Consolidated Supply Co., Inc., 1102 N. Charles St., Baltimore, Md.; structure conc. and hollow tile, 1 story, dirt and conc. floors, conc. foundation, tile roof. 9-3

D. C., Washington—Architect of The Capitol, David Lynn, has low bid at \$2,318,000 from George A. Fuller Co., Munsey Bldg., for wing for Senate Office Bldg.; Wyeth & Sullivan, Archts., 16 Jackson Place. 9-3

D. C., Washington—Prospective estimators on \$8,240,000 U. S. Supreme Court Bldg., bids Oct. 21 by Architect of The Capitol, David Lynn: Aronberg-Fried Co., 155 E. 44th St.; Turner Construction Co., 420 Lexington Ave., all New York; B-W Construction Co., 720 W. Wabash Ave.; Jacobson Bros., 19 S. LaSalle St.; Paschen Bros., 33 N. LaSalle St.; John Griffith & Sons Co., 228 N. LaSalle St., all Chicago, Ill.; Consolidated Engineering Co., Inc., 20 E. Franklin St.; J. Henry Miller, Inc., Sixth Floor, Miller Bldg., Eutaw and Franklin Sts.; Morrow Bros., Inc., Fidelity Bldg.; Price Construction Co., Md. Trust Bldg., all Baltimore, Md.; John W. Cooper Co., Natl. Press Bldg.; H. V. Debo, care M. Cain Co., 3315 Eighth St., N. E.; George A. Fuller Co., 1138 Munsey Bldg.; Charles Shutrump & Sons Co.; Charles H. Tompkins Co., 1608 K St.; James Stewart & Co., Inc., 2514 Mass. Ave., N. W., all Washington; John Gill & Sons Co., Bulkeley Bldg., Cleveland, O.; McCloskey & Co., 1820 Thompson St., Philadelphia, Pa.; Struck Construction Co., 147 N. Clay St., Louisville, Ky.; Murch Bros. Construction Co., Rwy. Exch. Bldg., St. Louis. 9-10

Fla., Jacksonville—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids Oct. 15 for constr. (except elevators) of parcel post bldg., W. Bay and Cleveland Sts.; \$600,000, brick and stone facing, 2 stories, 100x265 ft., steel windows; conveyors, chutes, vaults, counters, shelving, etc.; H. J. Klutho, Archt., 2030 Main St., Jacksonville; drawings from office Supvg. Archt. 12-11

Fla., Miami—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., has low bid at \$1,032,472 from Ralph Sollitt & Sons Construction Co., 1353 Bldrs. Bldg., 228 N. LaSalle St., Chicago, Ill., and 518 E. Sample St., South Bend, Ind., for post office, court house, custom house, etc.; low bid at \$40,590 from S. Heller Elevator Co., Milwaukee, Wis., for elevators; Phineas E. Paist & Harold D. Stewart, Archts.; L. Murry Dixon, Asso. Archt., all Ingraham Bldg., Miami, and Ponce de Leon Entrance Bldg., Coral Gables, Fla.; Maurice H. Connell, Mech. Engr., McAllister Hotel Bldg., Miami; Harvey Baxter, Struct. Engr., 518 Harding St., P. O. Box 65, Coconut Grove, Miami. 9-10



Fairmont, W. Va.; Tri-State Electric Co., 324 N. Willet St., Memphis, Tenn.; Odorn & Pfuger Electrical Construction Co., 1106 N. Second St., Monroe, La. 8-27

Va., Norfolk—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, probably soon call for bids to clear site for \$1,500,000 Federal bldg.; stone, 2 passenger elevators; Benj. F. Mitchell, Rudolph, Cooke & Van Leeuwen, Inc., Asso. Archts., all Arcade Bldg., Norfolk; archts. lately incorrectly reported. 9-10

W. Va., Elkins—Treas. Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids Oct. 14 for post office, court house, etc.; \$120,000; drawings from office Supvg. Archt.

### Hospitals, Sanitariums, Etc.

Ark., Little Rock—Arkansas Construction Comsn. opens bids Oct. 22 for central heating plant, \$3,250,000 State Hospital for Nervous Diseases; central boiler house, smokestack, underground steam and hot water distribution system, boilers and equipment; plans from Mann, Wanger & King, Archts., 1316 Donaghey Bldg., Little Rock. 9-17

Ga., Winder—Dr. W. L. Mathews plans \$25,000 community hospital; brick, conc. foundation, comp. roof, steel sash; Marye, Vinour, Marye & Armistead, Archts.; Felton Davis, Asso. Archt., both Walton Bldg., Atlanta; drawing plans.

Md., Baltimore—City Dept. of Public Works, Bureau of Mechanical Electric Service, has low bid at \$13,895 from Industrial Piping & Engineering Co., Court Sq. Bldg., for steam line, Baltimore City Hospitals. 7-16

Mo., St. Louis—St. John's Hospital, 307 S. Euclid Ave., plans addition; 4 stories, 134x84 ft.

Tex., San Antonio—State Bd. of Control, Austin, has low bid at \$11,490 from Geo. E. Wieland, 808 Travis Bldg., for conc. porches, men's ward, San Antonio State Hospital; wire guards, Logan Co., Franklin and Buchanan Sts., Louisville, Ky., at \$3689; rein. material, Alamo Iron Works, 130 Santa Clara St., \$3840; Leo M. J. Dielmann, Archt., 306 E. Commerce St. 7-23

Va., Norfolk—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, probably start work by Jan. 1 on \$800,000 hospital bldg., Hampton Blvd., for Public Health Service; about 183 beds; connect with present bldg.; additional story on each wing; double set of quarters and apartment for medical officers; extension of nurses' quarters and attendants' quarters; sidewalks and driveways; outside service lines; waterproof present bldg. 2-26 under Government and State.

### Hotels and Apartments

Fla., Miami Beach—Covington Corp. has low bid at \$11,200 from R. W. Edholm, Inc., 825 Lincoln Rd., to renovate first floor, Covington Arms Apt., 824 Alton Rd.; Lee Wade, Archt., Exch. Bldg., Miami.

La., Hammond—Strawberry & Vegetable Auction, Inc., Malcolm Wright, Sr., Chmn., Bldg. Comm., opens bids Sept. 30 for Otis Hotel; brick, 3 stories, 57 rooms, terrazzo floors, tile baths, slate roof, steam heat, plastered interior; Favrot & Livaudais, Ltd., Archts., Hibernia Bank Bldg., New Orleans.

Md., Hagerstown—Mrs. C. C. Jones, City Park, plans 2-story frame inn; C. E. Kountz, Archt., Young Bldg.

N. C., Marion—C. F. James purchased Marlanna Hotel; reconstruction interior, install elevator.

Okla., Woodward—D. D. Baker considers remodeling Baker Hotel for 20 apartments.

### Miscellaneous

Ark., Little Rock—Little Rock Baseball Assn., H. Grady Manning, Sec., Marion Hotel, has plans by Thompson, Sanders & Ginocchio, Archts., Hall Bldg., for \$50,000 conc. and steel grandstand and bleachers, Fair Park; seat 3800 and 1800; soon let contracts. 9-3

Md., Frederick — C. Burr Artz Library, Jacob Rohrbach, member, plans \$125,000 library.

Tex., Austin—Home of Holy Infancy, care Rt. Rev. C. E. Byrne, Bishop, Galveston, erect struct. clay tile and brick veneer bldg., W. 28th and Nueces Sts.; about 81x14 ft.; ground floor conc. and stone veneer, conc. floor slabs, metal lath, tile floors, stone trim, steel sash, 2 sun porches; Edwin C. Kreisle, Archt., Scarbrough Bldg.; low bid at \$25,697 from Frank Rundell, 107 E. Sixth St.

### Railways Stations, Sheds, Etc.

Va., Richmond—Chesapeake & Ohio Ry. Co., C. W. Johns, Ch. Engr., plans over-freight warehouse, 17th and Marshall Sts.

### Schools

Ky., Louisville—Bd. of Education, Saml. D. Jones, Bus. Director, advises plans changed for present at least on \$100,000 Longfellow School addition; J. M. Colley, Archt., Eighth and Chestnut Sts.; plans being drawn by Architectural Dept. for Senior-Junior High School, First, Second, Lee and Avery Sts.; hope to have plans ready for bids latter part 1931. 2-5

La., Jonesboro—Jackson Parish School Bd., W. C. McClendon, Sec., probably call for bids latter part Oct. for \$100,000 high school; fireproof, rein. conc., brick, stone trim, 2 stories, rein. conc. foundation, steel and iron work, built-up comp. roof, wood floors, sheet metal work, blackboards; J. W. Smith & Associates, Archts., Ouachita Natl. Bk. Bldg., Monroe. 8-6

Md., Annapolis—Chief, Navy Dept., Bureau of Yards and Docks, Washington, receiving bids, date not determined, for extension to bldg., Naval Engineering Experiment Station; conc., 2 stories, wood piles, artificial stone coping, orna. metal work, built-up roof, sheet copper work, lath, struc. slate, metal partitions and doors, steel windows, hand-operated freight lift, drinking foundations, and plumbing, heating, ventilating and elec. system.

Md., Baltimore—Jesuit Fathers, Rev. Ferdinand C. Wheeler, Pres., Loyola High School, plans to start work in Spring on first unit of high school, Boyce Ave. near Charles St. Ave.; financing through bequest; architect not selected.

Md., Baltimore—Johns Hopkins University, S. Page Nelson, Bus. Mgr., Charles and 34th Sts., postponed erection of law bldg.; John Russell Pope, Archt., 542 Fifth Ave., New York.

Md., Pomonkey—Charles County School Commrs., F. Bernard Gwynn, Supt., La Plata, receiving bids for 6-room school; J. M. Armstrong, Archt., 15 Franklin St., Annapolis, Md. Following firms estimating: Goode Construction Co., 11 E. Fifth St., Charlotte, N. C., and Annapolis; John Grabis, Hughesville, Md.; Maryland Sales & Engineering Co., Laurel; Geo. Butler, Pomonkey. 8-20

N. C., Charlotte—City School Commrs., Chas. Blackburn, Sec., receive bids until Sept. 25 for wrecking Myers Street School bldg. and moving all material from lot; new school planned later. 8-20

N. C., Norwood—Stanly County Bd. of Education plans high school; State Dept. of Education approved \$20,000 loan; 11 classrooms; contract Sept. 18.

Tenn., Nashville—Bd. of Education, Albert E. Hill, Pres., has low bid from V. L. Nicholson & Co., Ind. Bldg., for \$500,000 East Nashville High School; Marr & Holman, Archts., 702 Stahlman Bldg. 9-17

Tex., Bowie—Montague County School Bd., R. G. Folk, member, may enlarge cafeteria at high school.

Tex., San Antonio—City Bd. of Education, Mrs. J. E. King, Pres., opens bids Oct. 2 for addition to Milam School No. 4, 1101-07 Austin St.; struc. clay tile and brick, 2 stories, 5 rooms, cafeteria, conc. floors, metal lath; separate bids same date for plumbing, heating and wiring; L. Harrington Co., Archt. Bldrs. Exch. Bldg.; L. D. Royer, Mech. Engr., Smith-Young Tower; Phelps & DeWees, School Archts., Gunter Bldg.

Tex., San Antonio—City Bd. of Education, Mrs. J. E. King, Pres., soon start sketches

for negro elementary and junior high school, E. Commerce, Montana, Grimes and Rio Grande Sts.; brick and rein. conc.; Harvey P. Smith, Natl. Bk. of Commerce Bldg., and Emmett T. Jackson, Bldrs., Exch. Bldg., Asso. Archts.; L. D. Royer, Mech. Engr., Smith-Young Tower; Phelps & DeWees, School Archts., Gunter Bldg.

Va., Richmond—Richmond Public Schools Bd. of Trustees, 312 N. Ninth St., A. H. Hill, Supt., advises erection of elementary school, Floyd Ave. and Nansemond St., postponed at least 1 year. 7-30

Va., Richmond—Medical College of Virginia, Dr. W. T. Sanger, Pres., opens bids Sept. 24 for library bldg., Clay St.; \$100,000, 2 stories and basement; Baskerville & Lambert, Archts., Cent. Natl. Bk. Bldg.

W. Va., Midway—Malden Dist. Bd. of Education receives bids Sept. 26 at Malden for elementary school; Herbert S. Kyle, Archt., Union Bldg., Charleston.

W. Va., Paw Paw—School Bd. has low bid at \$24,731 from Geo. A. Bowman for high school auditorium; Geo. A. Kraft, Archt., 443 Cumberland St., both Cumberland, Md. 9-17

### Stores

Fla., Miami Beach—Francis Permanent Wave Shop, Shoreland Arcade, E. Flagler St., Miami, erect store, Alton Rd. near Lincoln Rd.; rein. conc., conc. block and stucco, 1 story, 3 stores, terrazzo floors, plate glass fronts, comp. and tile roof, cast stone; V. H. Nellenbogen, Archt., 925 Lincoln Rd., Miami Beach; receiving bids.

Ga., Atlanta—L. F. Bellgrath, Ponce More Apartments, erect 5-store bldg., Ponce de Leon Ave. and Moreland Ave., N. E.; brick, tar and gravel roof, plate glass fronts.

Md., Baltimore—A. Green, 1617 E. Oliver St., plans 3-story brick store and 2-apt. bldg., Marmon Ave. near Belleville; 30x44 ft.; 18x18-ft. garage.

Miss., Bay St. Louis—Philip Levine erect 1-story bldg.; 60 ft. front, hollow tile and brick; 2 stores.

Tex., Channing—Horn & Allen General Store plans bldg. to replace structure lately noted burned.

Tex., Longview—Gilbert Bule Carter, Archt., 121 N. Center St., has opened bids for Forman office bldg., Methvin, Center and Bank Sts.; O. L. Bodenhamer, Rental Agt.; 2 stories with foundation for 2 more, fireproof, brick and stone; 6 stores on first floor.

Tex., San Antonio—Petrich-Saur Lumber Co., 104 Lamar St., representative, erect brick and tile bldg., E. Houston St. and Gevers Ave.; 108 ft. front; 5 stores; plans by company archts.; W. E. Simpson Co., Milam Bldg., Engr.; bids in.

### Theatres

N. C., Canton—Strand Theater, W. H. Odum, Mgr., erect \$60,000 theater, State Highway No. 10 at Park Ave. and Adams St.; 50x115 ft.; auditorium seat 250, balcony 250; upholstered opera chairs; Simplex machines; Western Electric equipment; to be operated by Mr. Odum and M. C. Sprinkle Prop., Canton Ice & Coal Co.

Tex., Houston—Wm. Horwitz plans about 4 community center motion picture houses; constr. to be under supervision of Eddie Bremer; stores, swimming pool, retiring rooms, audiphones; apartment-hotel quarters on second floors; plans being drawn.

## BUILDING CONTRACTS AWARDED

### Bank and Office

Tenn., Kingsport—American Gas & Electric Co., Carl Thornburg, Div. Engr., let excavation contract for \$150,000 office bldg., Sullivan and Broad Sts., for Kingsport Utilities, Inc., subsidiary, to Litten & Buckles; conc. struct. steel, cut stone trim, fireproof; auditorium; plans by Allen N. Dryden. 4-30

### Churches

Ky., Ashland—Advance Methodist Church, Rev. Chas. F. Pegram, Pastor, started remodeling and enlarging work; additional story.

Okla., Henryetta—St. Michael's R. C. Church, Rev. Theo. Cauden, Pastor, erecting buff brick church; local materials except steel; Jos. R. Koberling, Archt., Court Arcade Bldg., Tulsa.

Tex., Longview—Church of Christ, J. W. Akin, Chmn., Bldg. Comm., let contract to Turner & Lively for bldg., North and Second Sts.; brick, oak pews, auditorium and basement, 13 classrooms; \$18,000, including site.

### City and County

Md., Westminster—Carroll County Bd. of Commrs. started work on \$10,000 jail repairs.

Tex., Beaumont—Neches Electric Co., 616 Pearl St., Beaumont, and Jack Hyde's Electric Shop, 409 Procter St., Port Arthur, have contracts for \$18,722 elec. fixtures and equipment for \$1,000,000 Jefferson County court house.

W. Va., Clarksburg—Following have sub-contracts for \$456,700 Harrison County court house: Conc. materials, including cement, sand, gravel, lime, slag, etc., Central Supply Co., Clarksburg; rein. steel, Kalman Steel

Corp., Pittsburgh, Pa., 140 tons; 620 tons struc. steel shapes, McClintic-Marshall Corp., Pittsburgh, Pa.; materials for office and fence, Charles A. Short, Shinnston, W. Va.; Hutter Construction Co., Contr., Fond du lac, Wis.; Walker & Weeks, Archts., 11001 Euclid Ave., Cleveland, Ohio; Carleton C. Wood, Asso. Archt., Lowndes Bldg., Clarksburg. 9-10

### Dwellings

D. C., Washington—Alfred H. Bellman, 736 Fifth St., N. W., erect 3 frame dwellings, 2505-09 Bunker Hill Rd., N. E.; 2 stories, conc. block foundations, comp. shingle roofs, hot water heat; total \$12,000; owner builds.

D. C., Washington—Capitol View Realty Co., 917 New York Ave., erect 2 brick dwellings, 11-15 53rd St., N. E.; slag roof, hot water heat; total \$10,000; Harry Sisk, Contr., 1031 Girard St., N. E.

D. C., Washington—C. W. McKendrie, 1637 Hobart St., N. W., erect 3 brick dwellings, 3617-25 Jocelyn St.; slate roofs, hot water heat; owner builds.

D. C., Washington—Herbert, Inc., erect 3 dwellings, 1804-08 20th St., N. W.; conc. block, slag rooms; P. Vanderloo, Contr., 1728 20th St.

D. C., Washington—Mrs. C. C. Williams alter residence, 3033 N. St., N. W.; Wyeth & Sullivan, Archts., 726 Jackson Place, N. W.; Teunis F. Collier, Contr., 1109 20th St.

D. C., Washington—R. H. Sanford, 710 Chandler Bldg., erect 10 brick dwellings, 220-38 Longfellow St.; tin roofs, hot water heat; total \$60,000; owner builds.

D. C., Washington—W. C. & A. N. Miller, 1119 17th St., N. W., have permit for 2 dwellings, 4918-26 Hillbrook Lane; brick and frame, 3 stories; total \$27,000; owners build.

D. C., Washington—W. Walter Vaughn, 1013 Urell Place, N. E., has permit for 6 brick dwellings, 925-27 and 922-26 Upshur St., N. E.; total \$42,000; owner builds.

Fla., Miami Beach—Clayton E. Shappell, 12th St., considers erecting \$25,000 dwelling and garage, Flamingo Drive.

Fla., Miami Beach—Carl Green, 423 Navarro Ave., Coral Gables, considers erecting dwelling and garage, Pine Tree Drive and 59th St.; C. LeRoy Kinports, Archt., Coconut Grove, Miami.

Fla., Miami Beach—Carl W. Braznell, 4310 Collins Ave., let contract to J. C. Gaffney Co., 933 Lincoln Rd., for 2 dwellings, Indian Creek Drive near W. 43rd St.; rein. conc., conc. block, brick and stucco, 3 stories, 42.6x32 ft., tile, rubber, wood, and cement floors, tile wainscoting in baths, wrought iron, orna. and misc. iron, steel sash, tile roof, sheet metal, cast stone; garages, servants' quarters; E. L. Robertson, Archt., Calumet Bldg., Miami.

Fla., Miami—Franklin Properties, Inc., J. F. Ireland, Pres., 815 Ingraham Bldg., consider erecting 10 bungalows, Brickell subdivision, and 4 in N. W. section; rein. conc., conc. block and stucco; owner builds, Mr. Willford, Supt.

Fla., Miami Beach—E. P. Frills, Contr., 101 N. E. 87th St., Miami, plans 2 dwellings near King Cole Hotel; rein. conc., conc. block and stucco.

Fla., Winter Park—Walter H. Tappan let contract to Emmett Nicholson for \$13,000 residence, Webster Ave.; work started.

Ga., Atlanta—W. H. McGee, R. F. D. No. 4, erect 2 dwellings, 1649-55 Gordon St., S. W.; brick veneer, comp. roof; owner builds.

La., New Orleans—Dr. A. Mogabgab, Canal Bank Bldg., erect brick veneer single residence, Versailles Blvd. near S. Claiborne St.; tile roof, \$10,000; Paul G. Charbonnet, Contr., 830 Union St.

La., New Orleans—J. A. Haase, Jr., 916 Union St., has contract at \$12,074 to alter and enlarge dwelling, 460 Broadway; cast stone, slate roof, tile work, plumbing fixtures, elec. work, marble, orna. iron, rubber flooring; Moise H. Goldstein, Archt., Amer. Bank Bldg.

Md., Baltimore—Joseph O. Blair, Bldr., erect \$10,000 duplex and 2-car garage, 3600 Sequoia Ave.; stone and stucco.

Md., Baltimore—Mrs. S. Elizabeth Rush, 4101 Groveland Ave., erect frame residence, Pleasant Heights, Liberty Rd.; Danl. S. Sackerman, Archt., 125 E. Baltimore St.; Ralph N. Marquette, Contr., 4607 Park Heights Ave.

Md., Chestertown—Howard Strong let contract to Ralph MacMurray, 39th St. and Old York Road, Baltimore, for \$25,000 residence; frame, 2 stories, stone foundation, hardwood floors, slate roof, hot water heat; W. H. Emory, Jr., Archt., Balto. Trust Bldg. 8-20

Mo., St. Louis—Catherine Kelly, 4554 Lexington St., erect 3 dwellings, 4845-49-53 Calvin St.; \$9000; comp. shingle roof, hot air heat; R. A. Murray, Archt., 4926 Thekla St.; H. J. Kelly, Bldr., 4554 Lexington St.

Mo., St. Louis—C. Brickler erect \$13,000 dwelling, 6336 Itaska St.; slate roof, steam heat; Hellmuth & Hellmuth, Archts., (commercial Bldg.); C. W. Schuler & Co., Bldrs., 2838 Texas St.

Mo., St. Louis—Grandmer Realty Co. erect 4 brick dwellings, 6103-11 Newport St.; comp. roofs, hot air heat; total \$16,000; Ball Lumber & Supply Co., Contr., both Box 45, Clayton.

Mo., St. Louis—J. A. Schaefer, 3960 Federal Place, erect 3 brick dwellings, 5644-56-60 Murdock St.; comp. shingle roofs, hot water heat; total \$12,000; C. E. Stevens, Archt., 5417 S. Grand; owner builds.

Mo., University City, St. Louis—E. Turner, 6331 Clayton St., erect 4 brick dwellings, 7335, 7311-35 Barmter and 7522-26 Delmar Ave.; stone foundations, comp. shingle roof; total \$18,000; F. G. Avis, Archt., 1021 Big Bend Blvd.; owner builds.

N. C., Asheville—Mrs. Alice M. Carey, 1222 Locust St., Cincinnati, O.; \$14,000 residence, Kimberley Ave.; L. L. Merchant Construction Co., Contr., 290 Biltmore Ave., Asheville, advises indefinitely postponed; Henry Irven Gaines, Archt., Public Service Bldg., Asheville. 9-17

Okla., Tulsa—John A. Souder, 816 N. Delaware Place, erect stone veneer residence; 1½ stories and basement, 34x44 ft.; day labor; work started.

S. C., Greenville—J. H. Johnson, 20 Atwood St., erect \$10,000 residence, 18 Atwood St.; Wm. R. Ward, Walker Bldg., Archt.; J. F. Welborn Lumber Co., Contr., 221 Pendleton St.

Tex., Houston—Frank L. Webb, Kirby Bldg., erect \$12,500 residence, 2935 Chevy Chase St., River Oaks; O. O. Scott, Contr., 2612 Isabella St.

Va., Middleburg—R. E. McConnell, care Penrose V. Stout, Archt., 420 Lexington Ave., New York, let contract to W. J. Hanbeck, Warrenton, Va., for residence; brick, stone, 2 stories, 139x44 ft., conc. block foundation, wood floors, wood frame, tile, marble, struc. steel and iron, kalamein doors and trim, sheet metal, linoleum, shingle and comp. hip roof, vapor heat, gypsum blocks, waterproofing. 9-17

Va., Richmond—Rosa V. Morris erect residence, 2507 Seminary Ave.; J. J. Lillis, Contr., 307 W. Overbrook Road.

### Government and State

Ala., Sylacauga—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, let contract at about \$57,500 to A. J. Honeycutt Co., Martin Bldg., Birmingham, Ala., for post office; rein. conc., brick, tile, stone trim, marble, 2 stories, comp. roof. 8-20

Ark., Little Rock—Southern G-F Co., 263 Decatur St., S. E., Atlanta, Ga., reported, has contract for 432 tons conc. bars for \$1,435,000 Federal bldg.; J. P. Farnsworth & Co., Inc., Contrs., Maritime Bldg., New Orleans, La. 9-17

D. C., Washington—Additional subcontracts let on \$800,000 conservatory bldg., U. S. Botanic Garden: Millwork, Hyde-Murphy Co., Dist. Natl. Bk. Bldg.; marble, slate and tile, Standard Art Marble & Tile Co., 118 E. St., N. W.; interior stone work, Louis Perna & Sons, Inc., 827 14th St., all Washington; hardware, misc. iron and glazing, Lord & Burnham, Irvington, N. Y.; models, Leon Hermant, 19 E. Pearson St., Chicago, Ill.; Bennett, Parsons & Frost, Archts., 80 E. Jackson Blvd., Chicago; George A. Fuller Co., Contr., Munsey Bldg., Washington. 8-20

D. C., Washington—American Bridge Co., Pittsburgh, Pa., reported, has contract for 815 tons struct. steel for \$865,000 bldg. for Public Health Service; 250 tons conc. bars to Buffalo Steel Co., Buffalo, N. Y.; J. H. DeSibour, Archt., 1200 15th St., N. W., Washington; Wills, Taylor & Mafera Corp., 303 W. 42nd St., New York. 8-20

Ga., Valdosta—Amory Mellen let contract to Donald McIver, 1007 Candler Bldg., Atlanta, and Valdosta, for brick residence; conc. foundation, hardwood and tile floors, steam heat, steel sash; Marye, Vinour, Marye & Armistead, Archts., Walton Bldg., Atlanta.

Ky., Harlan—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., has low bid at \$57,500 from Boone, Eason & Wood, Bluefield, W. Va., for post office. 9-10

La., New Orleans—Werling & Brandon, 3718 Banks St., has screen contract for conversion of bldg. for Federal prison for Dept. of Justice, Washington; rein. steel, C. T. Patterson Co., Inc., 800 S. Peters St., both New Orleans; jail equipment, Southern Prison Co., 4500 S. Presa St., San Antonio, Tex.; Gervais F. Favrot, Contr., Balter Bldg., New Orleans. 9-17

Md., Cascade—U. S. Property & Disbursing Officer for Maryland let contract at \$11,900 to J. B. Ferguson & Co., 39 W. Washington St., Hagerstown, for 6 kitchens and mess bldgs., Camp Albert C. Ritchie.

Md., Jessups—State Bd. of Welfare let contract at about \$26,500 to Davis Construction Co., 9 W. Chase St., for 4 frame dwellings, House of Correction; Jas. S. Nussear, Jr., Archt., 9 E. Pleasant St.; Bd. have plans ready in about month for alteration to south cell wing and for \$50,000 water supply and sewerage; Henry G. Perring, Archt.-Engr., Court Square Bldg., all Baltimore. 9-17

N. C., Mount Olive—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, let contract at \$54,000 to General Engineering Corp., Upper Darby, Pa., for post office. 9-17

N. C., Rutherfordton—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, let contract at \$40,000 boys' dormitory, Whitaker State Orphans' Home, to S. S. Strong & Son, Beaver; heating and plumbing, Cosgrove & Maher, Commerce Exch. Bldg., Oklahoma City; brick, rein. conc. and steel, 2 stories and basement; J. J. Walsh, Archt., McAlester. 8-27

Okla., Pryor—State Bd. of Public Affairs, Oklahoma City, let contract for \$40,000 boys' dormitory, Whitaker State Orphans' Home, to S. S. Strong & Son, Beaver; heating and plumbing, Cosgrove & Maher, Commerce Exch. Bldg., Oklahoma City; brick, rein. conc. and steel, 2 stories and basement; J. J. Walsh, Archt., McAlester. 8-27

Va., Langley Field, Hampton—Constructing Quartermaster let contract at \$34,832 to J. L. Crouse, Inc., Box 642, Greensboro, N. C., for guard house; steel, rein. conc., brick and stone, conc. floors and foundation, tile roof. 9-17

### Hospitals, Sanitariums, Etc.

Ark., Hope—Hope and Hampstead County Hospital Assn. let contract at \$10,550 to C. A. Powell for Julia Chester Hospital; Colonial type, 25 rooms, white tile operating room, 15 patients' rooms; D. F. Weaver, Archt., Hope.

Ky., Lexington—Veterans Administration, Arlington Bldg., Washington, let contract at \$98,020 to Joseph A. Holpuch Co., 4010 W. Madison St., Chicago, Ill., for recreation bldg. and officers' quarters, U. S. Veterans Hospital; rein. conc., hollow tile, brick, architectural terra cotta, marble, steel sash, iron and steel stairs with metal and slate treads, slate, metal and built-up roofing, roof ventilators, metal lath. 9-17

N. C., Oteen—Veterans Administration, Arlington Bldg., Washington, let contract at \$134,000 to John M. Geary Co., Arcade Bldg., Asheville, for boiler house and conc. chimney, U. S. Veterans Hospital. 8-20

Okla., Supply—Bissell Builders Supply Co., Colcord Bldg., has subcontract for steel combination bucks and frames, hollow metal doors and metal toilet partitions for \$125,000 ward bldg. and \$85,000 power plant, Western State Hospital for Insane, on which work is up to second floor; wiring, Wetherbee Electric Co., 412 N. Hudson St., Oklahoma City; finish hardware, M. C. Hardware Co., 109 W. First St., Tulsa, Okla.; Pyrobar gypsum roof tile, United States Gypsum Co., 300 W. Adams St., Chicago, Ill.; Layton, Hicks & Forsyth, Archts., Braniff Bldg.; C. M. Dunning Construction Co., Contr., 420 N. Hudson St., both Oklahoma City; Contr. let sub-contracts in few weeks for roofing and sheet metal; lathing and plastering; caulking and weatherstrips; tile and terrazzo floors. 9-3

Tenn., Knoxville—City Council let contract at about \$73,000 to W. A. & J. E. Gervin, 220 W. Clinch Ave., for negro unit at General Hospital; conc. frame, brick, 3 stories, 45x144 ft., terrazzo and linoleum floors, asbestos shingle or clay tile roof, cast stone, dumb waiters, elec. refrigerators, elevator, inclinator, limestone, marble, metal ceilings, steel sash and trim, steel hospital type windows, hollow tile, ventilators, wire glass, brass and bronze work; furnishings, equipment, etc., \$20,000 to \$25,000; Clem H. Meyer, Archt., Deaderick Annex. 4-9

Tex., San Antonio—State Bd. of Control, Austin, let contract at \$11,490 to Geo. Weiland, 808 Travis Bldg., San Antonio, for conc. porches, men's ward, San Antonio State Hospital; wire guards, Logan Co., Franklin & Buchanan Sts., Louisville, Ky.; rein. steel, Alamo Iron Works; lumber, West End Lumber Co.; Leo M. J. Dielmann, Archt., 306 E. Commerce St. 7-23

### Hotels and Apartments

Ga., Macon—Lanier Hotel, T. W. Hooks, 523 Mulberry St., let contract to W. A. Stillwell & Son for repairs and changes to wing; brick, conc. foundation, comp. roof; W. Elliott Dunwoody, Archt., 460½ Broadway. 7-16



Md., Baltimore—Thomas Mullan, Bldr., 3945 Greenmount Ave., plans to start work early in 1932 on brick and stone trim apartment.

Mo., St. Louis—Wm. E. Fox, 5601 Goodfellow St., erect \$10,000 brick tenement, 5605-07 Goodfellow; tar and gravel roof, steam heat; Oliver Popp, Archt., Arcade Bldg.; Barth Building & Real Estate Co., Contr., 3500 California St.

### Miscellaneous

Fla., Coral Gables, Miami—Gables Racing Assn., Frank J. Bruen, Managing Director, turn grandstand around, new conc. floors and areaway, betting room on mezzanine; \$100,000 club house, 3 stories; new administration bldg. and paddock, about 70x150 ft., 14 frame 50x300-ft. barns; jockeys' quarters; 2 to 3 miles of roads; steel fencing; racing track; landscaping, etc.; total \$500,000; Paist & Stewart, Archts., Ingraham Bldg., George W. Langford Co., Contr., McAllister Hotel Bldg., both Miami.

Fla., Hialeah—Alex B. Orr, Jr., 45 N. W. Third St., has plumbing contract for \$100,000 club house for Miami Jockey Club, Hialeah Race Track, for which John B. Orr, Inc., Box 635, has gen. contract; millwork, Patterson Variety Works, 736 S. W. Tenth St.; roofing and sheet metal, Miami Roofing & Sheet Metal Works, 127 N. W. Fifth St.; flooring, Walton Flooring Co., 368 N. E. 60th St., all Miami; L. W. Geisler, Archt., 19 Via Parigi; Smith & Riddle, Inc., Supv. Engrs., 210 Royal Palm Way, both Palm Beach. 9-10

Tex., Austin—Texas Federation of Women's Clubs, Mrs. James Welder, Chmn., Bldg. Comm., Victoria, let contract to Eckert-Burton Construction Co., Burt Bldg., Dallas, for \$100,000 clubhouse; wiring, Fox Schmidt Co., 415 W. Sixth St., Austin; plumbing and heating, A. H. Shafer, 829 N. St. Marys St., San Antonio; brick, stone, rein. conc., fireproof, 2 stories and basement, 164x184 ft., struct. clay tile and metal partitions, steel casements, kalamein doors, steel stairs, metal comp., tin and slate roof, wood, tile, marble and linoleum floors; Henry Coke Knight, Archt., Wilson Bldg., Dallas. 9-3

### Schools

Ark., Mena—Western Arkansas Junior Agricultural College let contract at \$29,585 to Hardy Construction Co., Texarkana, for main bldg.; native stone; Clyde A. Ferrell, Archt., 1006 W. Sixth St., Little Rock. 9-10

Ky., Louisville—Bd. of Education, Saml. D. Jones, Bus. Director, let contract at \$171,688 to J. F. Russell for Nannie Lee Frayser School, Garden Acres Subdivision; plumbing, H. Netherton & Co., \$10,968, and heating, \$32,658; elec. work, Edw. G. Knauer, \$6565; J. M. Colley, Archt., Elgith and Chestnut Sts. 7-23

Md., Baltimore—L. A. Benson Co., Inc., 63 E. Lombard St., has contract at about \$9000 for lathes for machine shops, Polytechnic Institute.

North Carolina, Chatham County—Moser & Bumgarner, Hickory, reported, have contract at \$84,700 for schools at Bonlee, Goldston, Bells, Silk Hope, Bennetts and Siler City, for Chatham County Bd. of Education; plans by J. M. Kennedy, Archt., 3306 Hillsboro St., Raleigh.

N. C., Durham—Dietrich Bros., 220 E. Pleasant St., Baltimore, Md., have contract for 300 tons steel for \$300,000 nurses' home for Duke Hospital and Medical School for Duke University; Horace Trumbauer, Archt., Land Title Bldg., Philadelphia, Pa.; constr. under direction of A. C. Lee, Ch. Engr., Duke Construction Co. 9-3

N. C., Goldsboro—Goldsboro Plumbing & Heating Co., E. Center St., has heating and plumbing contracts for 6 Chatham County schools; Bonlee, Silk Hope, Belles, Goldston, Siler City and Bennett; \$25,000.

Okla., Enid—Following sub-contracts let on men's and women's ward and hospital addition, \$140,000 State Institute for Feeble Minded: Millwork, Thorne Planing Mill; brick, Palmer Brick & Tile Co.; wiring, Clinkenbeard-McMurray Electric Co.; painting, Dusky & Stephenson, all Enid; steel, Capitol Steel & Iron Co., 1726 S. Agnew St.; heating and plumbing, John L. Swafford Heating Co., 19 N. Dewey St.; Layton, Hicks & Forsyth, Archts., Braniff Bldg.; Brown & Myers, Engrs., Petroleum Bldg., all Oklahoma City; McMillen Construction Co., Contr., Broadway Tower, Enid. 8-20

S. C., Charleston—The Citadel erect duplex; brick, stucco, tile, conc. foundation; Lockwood Greene Engineers, Inc., Archt., Montgomery Bldg., Spartanburg; Gallivan Construction Co., Contr., Gallivan Bldg., Greenville.

Va., East Stone Gap—Pyle Bros. Construction Co., Kingsport, Tenn., have contract to erect school gymnasium, Wise County school.

Va., Fairfax—Fairfax County School Bd. let contract to Industrial Engineering & Equipment Co., Washington, D. C., for Franconia School; cinder block and brick, 4 classrooms; plans by Richard V. Long, Archt. for State Bd. of Education, Richmond. 7-23

Va., Lexington—Sigma Chi Fraternity let contract to C. L. Lewis for bldg.; Clark & Crowe, Archts., both Krise Bldg., Lynchburg. 9-10

### Stores

Ga., Atlanta—A. H. Bailey, 3268 Peachtree Rd., erect brick store, 1586-92 Piedmont Ave., N. E.; 1 story, conc. foundation, cement and wood floors, tar and gravel roof; owner builds.

Ga., Atlanta—Mrs. Sarah Grant Slaton and Whitehall Holding Co., remodel and enlarge bldg., Whitehall St., near Hunter St., S.W., for store; Morgan, Dillon & Lewis, Archts., Grant Bldg.; Griffin Construction Co., Contr., 452 Spring St., N. W.; 5 stories and basement, conc., hollow tile, brick, cut stone, wood floors, iron and steel, tar and gravel roof, sheet metal tin clad door; Morgan, Dillon & Lewis Archts., Grant Bldg.

Ga., Griffin—Lane Drug Co. remodel and enlarge store, Hill and Solomon Sts.; new front; Robt. Wheaton & Sons, Contrs.

Ga., Macon—E. J. Sawyer, Cross Keys St., erect store, Houston Ave.; 2 units; conc. foundation, brick; Wm. F. Oliphant, Archt.,

Grand Bldg.; R. H. Smalling's Sons, Contrs., Fourth Natl. Bank Bldg.

Ga., Macon—M. E. Shaw, 1605 Vineville Ave., has contract for store, Forsyth Rd. and Montpelier Ave.; brick, cast stone, tar and gravel roof; Wm. F. Oliphant, Archt., Grand Bldg.

Md., Baltimore—Dietrich Bros., 220 E. Pleasant St., have contract for rein. steel and for 400 tons struc. steel for 6-story and basement addition to Hutzler Bros. Co. dept. store; excavating and wrecking, Edw. E. Stafford Co., 400 Benninghaus Rd.; Office of Joseph Evans Sperry, Archt., Calvert Bldg.; Herman Doleman, Struc. Engr.; James Posey, Mech. Engr., both Balto. Trust Bldg.; Consolidated Engineering Co., Inc., Contr., 20 E. Franklin St. 9-3

Md., Laurel—Miss Christian and Thos. G. Kraeski let contract to Julius Kinlein, Amer. Bldg., for brick store, Main and C Sts.; 1 story, 38x75 ft.; Stanislaus Russell, Archt., 11 E. Lexington St., both Baltimore, Md.; leased to Great A. & P. Tea Co., Washington. 7-17

Tex., San Antonio—I. Meador, 1910 N. New Braunfels Ave., will let contract to C. C. Dishman, 305 St. Marys St., for store, E. Houston and Gevers Sts.; brick, struc. clay tile, stucco, 1 story, 65x108 ft., conc. and tile floors, built-up roof; 5 stories; W. E. Simpson Co., Const. Engr., 942 Milam Bldg.

### Theatres

Va., Roanoke—Community Theater Corp., C. G. Lindsey, Pres., let contract to Eubank & Caldwell, Boxley Bldg., for \$150,000 theater, Grandin Rd., Virginia Heights; seat 1000; plans by Contr. 5-14

## INDUSTRIAL NEWS

### "Caterpillar" Cash Price Reduction

The Caterpillar Tractor Company, Peoria, Ill., has announced a new policy of allowing a 2 per cent cash discount from its published factory list prices. While the company and its dealers have not heretofore discriminated between cash buyer and time buyer, the new policy is designed to give recognition to those buyers with cash purchasing power, without penalizing the time buyer. Due to increased and improved engineering and research facilities, also to concentrated manufacturing activities and more efficient production practices, the company has consistently reduced prices since its inception in 1925.

### Repeat Orders for Byers' Shovels

About a year ago, the State of North Carolina purchased for use of its highway department a Byers' Model 40 shovel, and as a repeat order recently purchased three additional shovels of the same type. These are manufactured by the Byers Machine Company, Ravenna, Ohio. Byers' Model 40 is a  $\frac{3}{4}$ -yard,  $\frac{3}{4}$  swing machine weighing 10 tons, complete with shovel attachment. As evidence of the favor it is finding with county and state highway departments, recent sales have been made to: Maine, 5 machines; Alaska Road Commission, 3; Maryland, 1; Iowa, 1; City of Cleveland, 1; Chicago, 1; State of Washington; New Haven, Conn.; Clyde County, Montana; Missoula County, Mont.; Marin County, Cal., and others.

### Robbins & Myers Philadelphia Manager

The Hoist & Crane Division of Robbins & Myers, Inc., Springfield, Ohio, announce appointment of R. B. Kite as manager of their Philadelphia territory with offices at 401 North Broad street, Philadelphia. In addition to hoists and cranes, other Robbins & Myers products include electric motors, generators, fans, corn poppers and household appliances.

### Moffatt Elevator Sales

The Moffatt Machinery Manufacturing Company, Charlotte, N. C., manufacturers of the new Moffatt ball bearing elevators, advise that their outlook for business is more promising at this time than it has been for the past 12 months. The company has booked over \$100,000 worth of business, many orders coming from the United States Government. Deliveries were made in North Carolina, Alabama, Mississippi and Virginia.

### Morse Chain Engineering Company

The Morse Chain Company, Ithaca, N. Y., announces a change of name to the Morse Chain Engineering Company, the personnel to remain the same. The company recently took over the lines of the Brown Manufacturing Company, producing heavy duty and counter shaft clutches, a machine table adjustable vice, sectional stock racks and the Dodge Manufacturing Company making V belt drives. These two lines will be added to the Morse marine equipment and the Morse Chain Company's silent chain drives, light and heavy duty flexible couplings, roller chains, etc.

### Engineers Extend Service

Ford, Bacon & Davis, Inc., New York, internationally known engineers, have opened a branch office in Dallas, Tex., where their subsidiary, the Ford, Bacon & Davis Construction Corporation also operates a branch. William von Phul, Jr., is manager of the engineering branch office and vice-president of the construction company. The two organizations have handled a large amount of natural gas pipe line construction, including the Southern Natural Gas Corporation's line from Louisiana to Birmingham and Atlanta, and about half of a 960-mile line from Texas to Chicago.

(Continued on page 46)



# WANT SECTION

## THE CLASSIFICATIONS IN THIS SECTION ARE:

Machinery and Supplies	Building Materials and Equipment	Bids Asked
Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.	This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.	Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.
<i>Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.</i>		

### Machinery and Supplies

**Boiler.**—R. P. Johnson (Mchy. Dealer), Wytheville, Va.—Wants prices and data on 50-h. p. Economic boiler.

**Belt Conveyors.**—Paul E. Horton, Horton Coal Co., R. F. D. No. 1, Newburgh, Ind.—Wants prices and data 2 used belt conveyors; 24-in. belt, 24 to 30 ft. long when double and 15-in. belt, 80 to 100 ft. long when double.

**Canning Machinery.**—Henry T. Phelps, 522 Hicks Bldg., San Antonio, Tex.—Wants prices and data on canning machinery for canning grapefruit, etc.

**Canning Plant Machinery and Supplies.**—Southwest Industrial Development Bureau, Southland Life Bldg., Dallas, Tex.—Wants prices and data from manufacturers of machinery, cans, jars, etc., for canning plants.

**Chromium-Plating Equipment.**—Ideal Machine Co., Bessemer City, N. C.—Wants prices and data on equipment for chromium plating.

**Engine.**—Machinery Record, Hackley Morrison (Mchy. Dealer), Mutual Bldg., Richmond, Va.—Wants prices and data on 50-h. p. Diesel or semi-Diesel oil engine, belted service, for immediate shipment.

**Motor (Electric).**—W. M. Smith (Mchy. Dealer), Birmingham, Ala.—Wants prices and data on 200-h. p. electric motor with outboard bearing, carrying pulley approx. 18 in. diam. and 24 in. wide, to operate at 900 r. p. m., 2200 volt a. c.

**Pipe.**—Justin Matthews Co., Little Rock, Ark.—Wants prices and data on 6 and 4-in. cast iron pipe, 2½ to 4-in. steel or wrought iron pipe, good condition, and 4 and 6-in. used hub and end valves, good condition.

**Road Rollers.**—D. C. Elphinstone, Inc., 120 S. Calvert St., Baltimore, Md.—Wants prices and data on 2 10-ton, 3-wheel, 4-cylinder, gasoline road rollers.

Ralph Carson Co., Charleston, Mo.—Wants prices and data on:

- (1) **Corn Sheller**—with and without power
- (2) **Ear Corn Loader**—portable and portable dump
- (3) **Grain Loader and Dump**—portable.

**Vinegar Plant Equipment.**—L. C. Merchant, L. L. Merchant Construction Co., 290 Biltmore Ave., Asheville, N. C.—Wants prices and data from manufacturers of equipment for commercial elder vinegar plant, to produce about 1000 gal. weekly.

Bullock Bros. Co. (Mchy. Dealer), Martin Bldg., Birmingham, Ala.—Wants prices and data on:

- (1) **Hammer (Steam or Air)**—for forging tools, largest tool to be handled with 6-in. piece, 1 in. thick and not over 14 in. wide
- (2) **Hoist Drum**—third drum, for American Hoist & Derrick Co. late model steam hoist.

City of Sullivan, Mo., W. A. Fuller Co., Constr. Engr., 2916 Shenandoah St., St. Louis, wants following:

- (1) **Electric Distribution System (Complete)**
- (2) **Engines**—Two 225 and two 300 h. p.

J. P. Hoyt, Estherwood, La.—Wants prices and data on following:

- (1) **Peanut Butter Manufacturing Equipment**
- (2) **Peanut Oil Manufacturing Equipment**
- (3) **Peanut Shelling Machinery.**

Machinery Record, Hackley Morrison (Mchy. Dealer), Mutual Bldg., Richmond, Va.—Wants prices and data on:

- (1) **Air Compressor**—portable, gasoline, about 125 ft.
- (2) **Clutch**—Hills, friction, 75 h. p., 4 armed, 24 in. diam.
- (3) **Conveyor Chair**—for refuse, 150 ft.
- (4) **Crane (Truck)**—5 to 6 ton
- (5) **Generator**—175 kv-a., 3 phase, 60 cycle, a. c., direct connected to full Diesel engine
- (6) **File Hammer (Steam)**—No. 2 Vulcan or equal.

S. Thomas, Red Springs, N. C.—Wants prices and data on following:

- (1) **Pop Corn Machinery**
- (2) **Potato Chip Machinery**
- (3) **Candy Making Machinery.**

Ways & Means Digest, H. E. Smith, 127½ Seventh St., Augusta, Ga.—Plans opening several branches of workshop for blind in South and wants:

- (1) **Broom Machine and Broom Making Outfit**—small, used
- (2) **Mattress Renovators**—power and hand, used, such as used in work-over shop.

W. M. Smith & Co. (Mchy. Dealer), Box 1709, Birmingham, Ala.—Wants prices and data on:

- (1) **Dump Cars**—6, used, 4 or 6 yd., standard gauge, steel underframe, 2-way
- (2) **Locomotive (Gasoline)**—10 or 15 ton.

### Miscellaneous

**Cans and Jars.**—See Machinery and Supplies—Canning Plant Machinery and Supplies.

**Ink Materials.**—A. H. Rozler, Route 1, Lumberton, N. C.—Wants prices and data on materials for making inks for fine cuts.

**Lunch Kits, Picnic Boxes, etc.**—OJX, Inc., Box 338, Frostproof, Fla.—Wants prices and data from manufacturers of lunch kits, picnic boxes and outfits pertaining to this line.

**Tank and Tower.**—Machinery Record, Hackley Morrison (Mchy. Dealer), Mutual Bldg., Richmond, Va.—Wants prices and data on 100,000-gal. tank and tower, 125 ft. high or not less than 100 ft.

D. F. Taylor, 331 West End Ave., New York City, plans expedition to Central America, and wants prices and data on:

- (1) **Bear Traps**—Victor
- (2) **Bird Snare and Bird Traps**
- (3) **Dehydrated Products**
- (4) **Heat Powder (Mexican)**
- (5) **Mesh Nets**—strong, 4 in., 35x35 ft., for netting animals like tigers, lions, etc.

Ocean Park Corp., 1019-18 Canal Bank Bldg., New Orleans, La., interested in developing Grand Isle, on Gulf of Mexico, 53 mi. from New Orleans, as all-year-round resort and bathing beach, and invites proposals from contracting engineering individuals or corporations qualified to submit plans, and to contract for hydraulic dredging necessary to provide deeper channel in Bayou Rigaud, using excavated material to fill in and reclaim low lands in rear of island.

O. K. Robinson, 3603 Chamberlayne Ave., Richmond, Va.—Wants prices and data from firms in position to make wooden toy.

### Building Material and Equipment

Dye & Mullings, Contrs., Columbia, Miss., want prices on following for 2 bldgs., \$110,000, Mississippi Insane Hospital, Whitfield, Jackson, Miss.:

**Flooring**—hardwood, terrazzo, tile.

### Building Material and Equipment

C. E. Williams, 3810 Fifth St., Brooklyn-Baltimore, Md., wants prices on:

- Roofing Slate**—17 squares, Bangor or equal
- Quarry Tile**—4x4 in., and 6x6 in.
- Interior Tile**—3x6 in. white wall tile, and 1-in. hexagon floor tile.
- Shingle Stain**—White.

### Bids Asked

**Air Compressors.**—Procurement Div., Veterans Administration, Washington, D. C.—Bids Sept. 30 for air compressors as required during period ending June 30, 1932.

**Analytical Balance.**—Ch. Division of Pur. and Sales, Dept. of Agriculture, Washington, D. C.—Bids Sept. 29 for analytical balance for Beltsville, Md.

**Boilers.**—Dist. Commrs., Washington, D. C.—Bids Oct. 2 for 3 steam heating boilers.

**Bridge.**—Magnolia, Miss. See Construction News—Bridges, Culverts and Viaducts.

**Bridges.**—State of Louisiana, 4 bridges. See Construction News—Bridges, Culverts and Viaducts.

**Bulkhead.**—Galveston, Tex. See Construction News—Miscellaneous Construction.

**Dredging.**—Florida. See Construction News—Drainage, Dredging and Irrigation.

**Filtration Plant.**—City of Nashville, Tenn., Hilary E. Howse, Mayor, The J. N. Chester Engineers, 813 Clark Bldg., Pittsburgh, Pa.—Bids Oct. 6 for constructing 14,000,000 gal. addition to filter plant.

**Electric Distribution System.**—Construction Service, Q. M. C., Office of Constructing Quartermaster, Langley Field, Hampton, Va.—Bids Sept. 30 for constructing electric distributing system for 18 double company officers' quarters, Langley Field.

**Electrical Equipment.**—See Sewer Construction.

**Field Improvements.**—Chief, Bureau of Yards and Docks, Navy Dept., Washington, D. C.—Bids Sept. 30 for planting landing field at naval reserve base, Miami (Opa Locka), Fla.

**Films.**—Dist. Commrs., Washington, D. C.—Bids Oct. 2 for motion picture films for public schools.

**Fire Hose, etc.**—Div. of Supply, Treasury Dept., Washington, D. C.—Bids Sept. 29 for 1000 ft. fire hose, 6 hose spanners and hydrant wrenches and 5-play hose pipes.

**Generating Set.**—Dist. Commrs., Washington, D. C.—Bids Oct. 6 for steam-driven electric generating set.

**Hacksaw Blades.**—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Oct. 6 for tungsten hacksaw blades.

**Lathe.**—Pur. Agt., Post Office Dept., Washington, D. C.—Bids Sept. 30 for brake drum turning lathe.

**Laundry Equipment.**—Procurement Div., Veterans Administration, Washington, D. C.—Bids Sept. 30 for 2 washing machines, under driven extractor, 4 presses and 1 air compressor, tumbler driver, extractor, double coat sleeve form.

**Levees.**—Louisiana. See Construction News—Miscellaneous Construction.

**Lighting System.**—U. S. Dept. of Agriculture, Bureau of Public Roads, Willard Bldg., Washington, D. C.—Bids Oct. 15 for Unit V of Mount Vernon Memorial Highway, consisting of lighting from south shore of Rorchers Run in Virginia to Mount Vernon Estate; consists of 150 single light metal standards, 2 double light cedar standards, 335 single light cedar standards, 121 erection of metal standards; 313 erection of cedar standards, 327 precast conc. transformer vaults; 131 individual light transformers for metal standards; 315 individual light transformer for cedar standards, 315 equipment on cedar light standards, 121 lighting fixtures for metal standards; 315 lighting fixtures for cedar standards; 133,000 ft. armored Parkway cable, No. 8, single conductor; plans, etc., on application.

**Lock.**—Marmet, W. Va. See Construction News—Miscellaneous Construction.

**Paints.**—Procurement Div., Veterans Administration, Washington, D. C.—Bids Sept. 30 for shellac, wood stains, turpentine, spar varnish and raw linseed oil.

**Paper Cups, etc.**—Procurement Div., Veterans Administration, Washington, D. C.—Bids Sept. 30 for 2,500,000 paper cups, 10,000 sheets index bristol, 500 sheets bristol board and 500 sheets same.

**Pipe (Cast Iron).**—See Sewer Construction.

**Revetment.**—St. Louis, Mo. See Construction News—Miscellaneous Construction.

**Road.**—Fredericksburg, Va. See Construction News—Roads, Streets and Paving.

**Road.**—Mississippi. See Construction News—Roads, Streets and Paving.

**Roofing Tile.**—Panama Canal, Gen. Pur. Officer, Washington, D. C.—Bids Oct. 1 for roofing tile, Sch. 2683.

**Searchlight Towers.**—Office of Corps Area Engr., Headquarters, Third Corps Area, 311 St. Paul Pl., Baltimore, Md.—Bids Oct. 19 for fabricating and delivering material for 2 rigid steel searchlight towers, Fort Monroe, Va.

**Sewer Construction.**—City of High Point, N. C., C. S. Grayson, Mayor—Bids Sept. 30 for furnishing 125 tons Class A, 12-in. bell spigot c. i. pipe; laying 6700 ft. of 12-in. c. i. pipe; setting 2 pumps, including interior piping and changing electrical equipment; reconstruction of exterior of Henry Perry Pumping Station; Wm. C. Olsen, Inc., Conslt. Engrs., Raleigh.

**Sewer Construction.**—Commrs. of Sewerage, Louisville, Ky., Frank D. Rash, Act. Chairman; Woolsey M. Caye, Tech. Engr.—Bids September 29 for Beargrass Creek improvements, South Fork, Sect. J. I., Contract No. 60; work includes: 234 feet rein. conc. open channel, 40 ft. wide, with 9 ft. walls; 70 ft. rein. conc. open channel, 40 ft. wide with 14 ft. walls, outlet structure, diversion and regulator chambers, inverted siphon with 3 lines of 24-in. c. i. pipe, connections, etc.; 3840 cu. yds. earth excavation; 1010 cu. yds. rein. or plain conc.; 124,000 lbs. steel rein. bars; 4100 ft. of timber piles.

**Sewer Construction.**—Dist. Commrs., Washington, D. C.—Bids Oct. 1 for constructing 6369 ft. sewer from 12-in. in diam. to 10 ft. x 7 ft.; information on application Room 427, Dist. Bldg.

**Sprinkler System.**—Chief, Bureau of Yards and Docks, Navy Dept., Washington, D. C.—Bids Sept. 30 for wet pipe sprinkler system at Navy Yard, Washington, together with service connection to existing underground water main.

**Stationery, Printing and Binding.**—State Bd. of Control, Printing Div., Austin, Tex.—Bids Oct. 6 for stationery, printing and binding for all departments and institutions of State of Texas.

**Stationery.**—Procurement Div., Veterans Administration, Washington, D. C.—Bids Oct. 1 for 11,000 reams mimeograph paper, 10,000 reams manifold paper, 5900 reams typewriter paper and 8600 doz. scratch pads; bids Oct. 2 for 450 reams typewriter paper.

**Steel Reinforcing Bars.**—See Sewer Construction.

**Stone.**—U. S. Engr. Office, Navy Bldg., Washington, D. C.—Bids Sept. 29 for 525 tons building stone.

**Taper Reamers.**—U. S. Engr. Office, Huntington, W. Va.—Bids Sept. 28 for taper reamers.

**Uniforms.**—Navigation Dist. Commrs. J. Russell Wait, Sec., Houston, Tex.—Bids Sept. 29 for uniforms for policemen and firemen.

**Valve.**—U. S. Engr. Office, Navy Bldg., Washington, D. C.—Bids Sept. 30 for automatic 12-in. check valve.

**Water Coolers (Electric).**—Supvg. Archt., Treasury Dept., Washington, D. C.—Bids Sept. 30 for 14 electric water coolers at U. S. post office, court and custom house, Richmond, Va.

**Window Shades.**—Bd. of Awards, Office of City Register, City Hall, Baltimore, Md.—Bids Sept. 30 for window shades for public school bldgs. for Dept. of Education; Joshua R. Jolly, Acting Sec., Bd. of School Commrs.

**Wood Surfacers.**—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Sept. 29 for motor driven wood surfer.

Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Sept. 29 for following, motor driven:

Engraving Machines  
Lathes (Engine)  
Thread Milling Machine  
Shaper  
Lathe—universal turret  
Filing and Sawing Machine  
Profiling Machine  
Cut-off Saw  
Chuckling Machine—automatic  
Lathe—back geared, screw cutting  
Metal-working Shaper  
Woodworking Shaper  
Shaper  
Metal Sawing Machine  
Lathes—tool-room, geared head.

Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Oct. 6 for:  
Drilling and Tapping Machine—upright, motor driven

Punches—hand and power operated  
Valve Refinishing Machine and Refinishing Tools.

Panama Canal, Gen. Pur. Officer, Washington, D. C.—Bids Oct. 9 for following, sch. 2687:

Air compressor, pedestal grinders, potato-peeling machine, water meters, paper knife grinding machine, metal cabinets, reinforcing bars, concrete waterproofing material, cable magnet wire, detonators, electric blowers, 5-h. p. motor, transformers, rectifier, testing battery, switches, cutouts, etc.

Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Oct. 2 for following, Sch. 2686:

Dipper-teeth parts, iron pipe fittings, pipe clamps, sanitary fixtures, range boilers, flush elbows, floor flanges, metal valves, cocks, rheostats, rectifiers, straight box connectors, knife switches, ratchet pipe cutters, snatch blocks, cable-pulling grips, etc.

(Continued from page 44)

#### Coldwell Transferred to Fort Worth

The International-Stacey Corporation, Columbus, Ohio, has transferred C. B. Coldwell from Chicago to the company's Fort Worth office, 1309 Aviation Building. Mr. Coldwell has been put in charge of sales of the Roots-Connorsville-Wilbraham Division line of R-C-W rotary positive blowers, meters, gas pumps and exhausters, Hayton centrifugal pumps and blowers and the Stacey Bros. Gas Construction Division's Telescopic and Stacey-Klonne dry seal low pressure gas holders and Stacey "Bullet" high pressure gas holders.

#### M-K-T Executive Representative

President M. H. Cahill of the Missouri-Kansas-Texas Lines, St. Louis, announces appointment of C. R. McDonald as executive representative, with headquarters in St. Louis. The appointment was effective September 8.

## Trade Literature

#### Creosoted Piling in Building Construction

"The Use of Creosoted Wood Piling for Building Foundations," is the title of an interesting publication prepared by the Service Bureau of the American Wood-Preservers' Association and the National Lumber Manufacturers Association, and presented to the Assistant Secretary of the Treasury Department, Washington. Its purpose is to set forth the merits of creosoted timber piles for support of permanent buildings where subsoil conditions are such as to require pile foundations. Particular reference is made to the present building program of the Government, including numerous buildings in the District of Columbia and various points throughout the country, in the construction of which piling has been necessary in many instances. It is pointed out that creosoted timber piles, when buried in the ground, do not suffer any deterioration that can be detected after as much as 30 to 40 years of service. The brief sets forth numerous examples of the use of creosoted timber foundation piles, and quotes engineers of various important railroads as to the merits of creosoted timber in foundation work.

**Dual Drive Motor Grader.**—The Austin-Western Road Machinery Co., Chicago, has issued Bulletin 1239, devoted to the new Austin Model 77 Dual Drive Motor Grader, described as one of the most powerful in its class and one of the most efficient. The new Model 77 is built around a tractor of Austin design throughout and is driven by a smooth-running, heavy duty 6-cylinder engine rated at 40 horsepower.

**Double Suction Pumps.**—Single stage, double suction centrifugal pumps of the horizontally split casing design are described and illustrated in Catalog B-2 recently issued by the De Laval Steam Turbine Company, Trenton, N. J. The pumps are characterized by relatively high speeds, high efficiencies and the ability to work against high heads per stage. They are particularly adapted to electric motor drive and are widely used in practically all industries and in waterworks plants.

## Carolina Farmers Prepared for Winter

It is doubtful if the farmers of the country ever faced a winter with larger stores of food and feed-stuffs. This is particularly true of farmers in the Carolinas, reports the South Carolina Bankers' Association, Columbia. It is estimated that, in so far as food and feed needs go, the position of the farmers of North Carolina is at least 25 per cent better than at this time last year. South Carolina farmers are probably as well or better off. Most of the Carolina farmers will have plenty to eat, plenty of fuel and comfortable houses in which to live, no matter how general conditions go. And they will be better prepared for next year than they were for this.

## Plan Building Exhibition

St. Louis, Mo.—The St. Louis Chapter, American Institute of Architects, is sponsoring a permanent architectural and building exhibition to occupy the first floor of the 20-story, \$5,000,000 St. Louis Mart, to be completed about December 1. The exhibition will illustrate design, show construction materials and display a large line of household appliances. A garden court will be a feature, as will a garage display. The building itself will be exclusively a manufacturers' and wholesalers' mart, with displays open to the public. A \$250,000 radio station will occupy the second floor.

## Southern Pacific May Get Cotton Belt

St. Louis, Mo.—In assent to an offer of the Southern Pacific Company for the acquisition of the St. Louis Southwestern Railway Company, popularly known as the Cotton Belt Line, stockholders of the latter have deposited 103,000 shares, more than is necessary to comply with the offer, according to Wood Low & Co., New York, depositaries for the Cotton Belt stockholders' protective committee. Completion of the deal is subject to approval by the Interstate Commerce Commission.



# Audit the Past and Budget the Future

More and more, the dividends of success depend on *reliable facts and figures*.

To know the true financial position of a business and, in their true proportion, the elements entering into its operating results, calls for an adequate independent audit embodying proper analysis of income and expenditures. This is fundamental.

Planning, or *budgeting*, is effective only to the extent that management has available the basic data for the purpose. The analysis of facts incident to budgeting, and the frequent comparison of actual operating results with the budget, point out the deficiencies in organization and waste in operations and expenditures. Such analyses and comparisons are chart and compass to progress and success.

"BUDGET CONTROL, *What It Does and How to Do It*," a 40-page booklet issued by Ernst & Ernst, will be mailed by nearest office on request.

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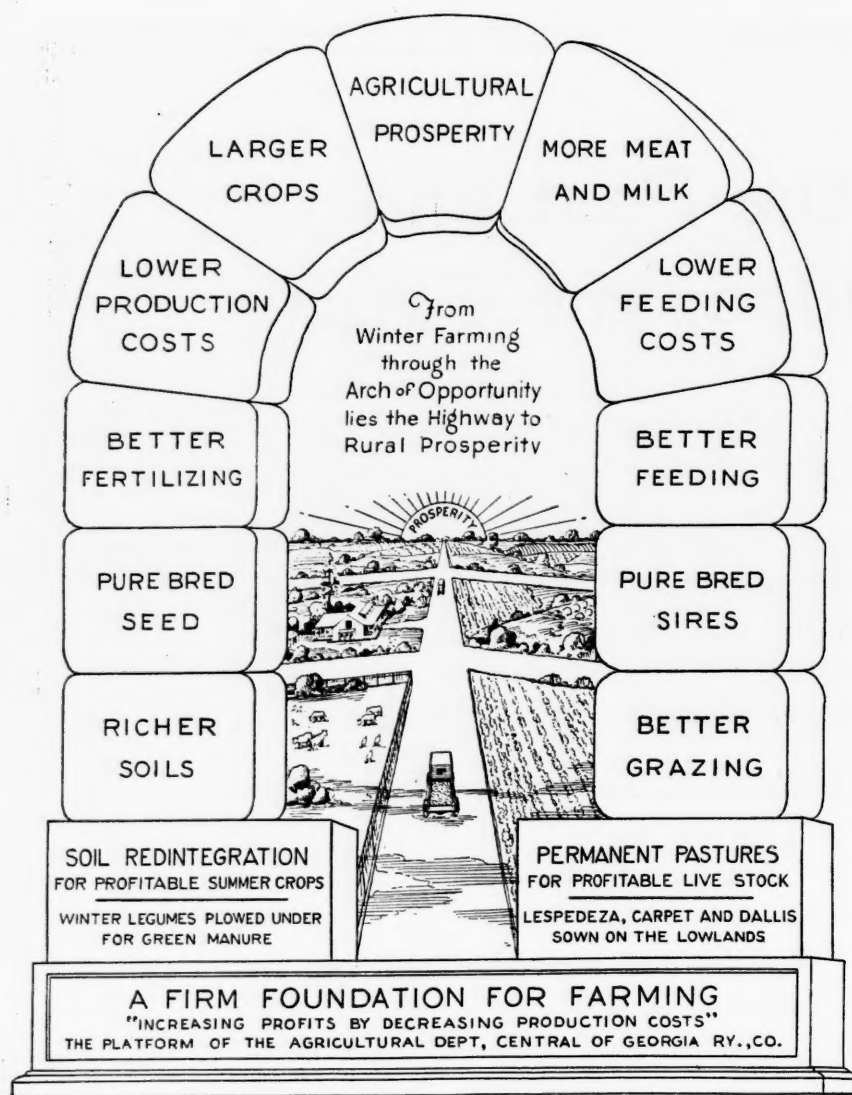
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### A Firm Foundation

Reproduced from the Agricultural News, published by the  
Central of Georgia Railway Company

#### Louisville School Construction \$15,000,000 New Orleans Bridge

Louisville, Ky.—The Board of Education has awarded general contract to the J. F. Russell Company, at \$171,688, for constructing the Nannie Lee Frayser elementary school in Garden Acres Subdivision. Contracts for plumbing and heating were awarded to H. Netherton & Co., at \$10,968 and \$32,658, respectively, and for electrical work to Edward G. Knauer, at \$6,565, all firms of Louisville. J. M. Colley, Louisville, is the architect.

Plans are being prepared by the Architectural Department of the Board for a senior-junior high school to be erected on a site between First, Second, Lee and Avery streets and it is the purpose of the Board to invite construction bids the latter part of the year.

New Orleans, La.—According to bids submitted for the construction of a new railway and highway bridge across the Mississippi River here, the cost of the structure is expected to be less than \$15,000,000, whereas preliminary estimates placed the cost around \$19,000,000. Bids were opened by the New Orleans Public Belt Railroad, Frank H. Joubert, secretary-treasurer and general manager, separate proposals being received for the substructure of the main bridge, superstructure for the main bridge, substructure for approaches and superstructure for approaches. Low bids were announced as follows: Substructure of main bridge, Seims-Helmets, Inc., St. Paul, Minn., at \$3,083,185; superstruc-

ture of main bridge, American Bridge Co., New York, \$2,618,670; substructure of approaches, MacDonald Engineering Co., Chicago, \$496,337; superstructure of approaches, McClintic-Marshall Corp., New York, \$3,226,789. Modjeski Masters & Chase, New York, are the engineers. The State Advisory Board has set November 2 as a tentative date of opening bids for the purchase of \$12,000,000 state bonds, of which \$7,000,000 would be used to pay the State's share of the cost of the new bridge and \$5,000,000 for the construction of roads.

#### Modernization Program

A nation-wide survey of obsolescence of industrial equipment and a campaign for modernization has been undertaken by the National Machine Tool Builders' Association. Much of the ground work for this campaign has been laid independently by the business press during the past year, in editorial programs dealing with the need for modernized industrial equipment and methods.

#### Bids on \$350,000 School

Galveston, Tex.—Bids will be opened October 9 by the Galveston School Board for constructing a \$350,000 junior high school, for which Giesecke & Harris, Austin, Tex., and R. R. Rapp, Galveston, are associate architects. L. D. Royer, San Antonio, is the mechanical engineer. Separate proposals will be opened at the same time on plumbing, heating and electric wiring.

#### \$1,210,000 Harbor Work

Brunswick, Ga.—The Atlantic Gulf & Pacific Dredging Co. has completed a \$568,628 contract for harbor improvement here, the work having been started on March 12 and prosecuted steadily. A contract calling for the improvement of Brunswick's inner harbor, known as East River, was started a few days ago by the same firm. The inner channel will be deepened from the plant of the Georgia Creosoting Co. to Brunswick Point. Work on the upper half of the river will be done by a government dredge and is expected to be started within a few weeks. An appropriation of \$1,210,000 was made for the harbor.

The State Highway Department, Nashville, Tenn., plans to award contracts October 2 on \$500,000 worth of road construction, two projects to be located in each grand division of the state.



## Some day you will travel with confidence on ships built by these young men

**WE BUILD GOOD SHIPS.** The materials are subjected to the severest tests science can devise before being accepted. The human factor also undergoes refining and strengthening processes. Our men are trained in our long established school of apprentices, from which our trustworthy and competent workmen are taken.

### THE APPRENTICE SCHOOL

The greatest care is observed in the selection of apprentices from native-born white boys not under sixteen years of age. They are educated with the cooperation of their parents, many of whom are seasoned employees. They are also endorsed by at least two citizens of good standing. They are selected with due regard to their physique, education, family background, residence and initiative. There is a formal relationship set up between employer and the apprentice whereby mutual obligations and duties are established between them.

The apprentice athletic association, the savings club, the honor council all build up physical, mental and moral responsibility to the end that the ideals of the founder, Collis P. Huntington, may always be maintained, to "build good ships, at a profit if we can; at a loss if we must; but always good ships."

Construction of Naval and Merchant Vessels—Ship Repairing—Gates  
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# Newport News Shipbuilding and Dry Dock Company

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Winder, Georgia.

J. B. Burson, Mgr.,  
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THE Overalls and Pants we send to you are all made upon the principle of

**QUALITY, PRICE, SERVICE**

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*Editor Manufacturers Record:*

I have read various opinions about what the cotton farmers of the South should do to bring the price of cotton back to a reasonably profitable figure. The idea of not planting any next year and passing a law to that effect is far from practical and may not be constitutional. It is not fair to prohibit a farmer to plant cotton, and stop there, without some constructive substitute.

About 44,000,000 acres are planted to cotton each year; the farmers must have a means of living, and if that land is not planted to cotton it must be planted to something that will take the place of cotton. The people who advocate a law to prevent planting cotton should see that every farmer has some other crop he can plant which will bring a profit and see that every farmer can get the seed or cuttings and provide a market. Also there would have to be an army of enforcers for the laws prohibiting the planting of cotton.

The best thing the Government can do is to help the farmer to help himself—no doles, no loans, no purchases of a portion of the crop, but help the farmer to build up an effective cooperative marketing system by which he may largely fix the price of his crop from the time it

leaves the farm until the consumer buys it.

Loans bring more burden to the farmer; buying any surplus which must finally be dumped back on the market, is far from helpful, and laws to prohibit planting a crop are not practical.

ARTHUR A. OLIVER.

**\$500,000 High School**

Nashville, Tenn.—Low bid to erect a new \$500,000 East Nashville high school building and stadium has been submitted to the Board of Education by V. L. Nicholson & Co., local contractors. The school building will be 280 by 200 feet, 3 stories. Marr & Holman, Nashville, are the architects.

**\$600,000 Federal Building**

Jacksonville, Fla.—Bids will be opened October 15 by the Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, for constructing a \$600,000 parcel post building here. The structure will be 100 by 265 feet, 2 stories, of brick and stone facing. H. J. Klutho, Jacksonville, is the architect.

**Incongruity**

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Attorneys and Counselors

Hattiesburg, Miss.

*Editor Manufacturers Record:*

Agencies of the United States Government recently have been advocating that farmers destroy a large percentage of their cotton crop, to increase the price of cotton so as to benefit the growers.

Whither are we drifting?

The United States Government has passed anti-trust laws to prohibit manufacturers from combining to restrict production for the purpose of increasing the prices of the commodities they manufacture. Several state governments have similar laws. Yet, here are officers of the United States Government advising and advocating that the farmers destroy part of their crops for the purpose of increasing the price.

This seems to me to be a most ridiculous and absurd situation: A government that maintains officers and agents to enforce a law prohibiting one class or group of its citizens from combining to increase prices; and the same government maintaining and supporting other officers and agents to advise another class or group to combine and restrict production for the purpose of increasing prices.

T. C. HANNAH.

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# FINANCIAL NEWS

## Bond Issues Proposed

Fla., Daytona Beach—City Comsn. authorized issuing \$117,000 refunding bonds.

Ky., Lawrenceburg—City, E. W. Ripy, Councilman, votes Nov. 3 on \$40,000 water-works bonds. 9-17

Ky., Owingsville—City votes Nov. 3 on \$13,000 water bonds.

La., Baton Rouge—State Highway Comsn., O. K. Allen, Chmn., Baton Rouge, reported, sell \$12,000,000, \$1000 denom. bonds about Nov. 2; \$7,000,000, state's share cost bridge, New Orleans; \$5,000,000, road building.

La., Cottonport—City, A. L. Bordelon, Mayor, votes Oct. 3 on \$25,000, 6% paving bonds.

La., Marksville—Avoyelles Parish Consolidated School Dist. No. 1 did not sell \$20,000, not to exceed 6% school bonds. 8-6

La., Marksville—Avoyelles Parish School Dist., reported, sold \$40,000 Evergreen School bonds to Continental Bank & Trust Co., New Orleans, as 6s. 7-16

La., New Orleans—City, New Orleans Public Belt R. R., Frank H. Joubert, Sec.-Treas. Gen. Mgr., reported, probably offer \$8,000,000 to \$9,000,000 rail and highway bridge bonds.

Md., Cumberland—Allegany County Comms., Thomas P. Richards, Clk., postponed sale of \$500,000, 4½%, \$1000 denom. road bonds. 9-10

Miss., Natchez—Adams County defeated \$400,000 road bonds. 8-20

Mo., Houston—Texas County votes Oct. 6 on \$25,000 bonds to complete rebuilding courthouse.

Mo., Maysville—City voted \$50,000 water plant bonds.

N. C., Bessemer City—Local Government Comsn., Chas. M. Johnson, Sec., Raleigh, opens bids Sept. 29 for \$19,500, 6%, \$1000 and \$500 denom. coupon public improvement bonds of Bessemer City.

N. C., Charlotte—City, Edgar Read, City Clk., issue \$135,000 indebtedness bonds.

N. C., Fayetteville—City, Bd. of Aldermen authorized issuing \$65,000 bonds for building terminals on Cape Fear River; hold special election in December.

N. C., Mebane—Local Government Comsn., Chas. M. Johnson, Dir., opens bids Sept. 29 for \$86,000 bonds; \$30,000, sewer bonds; \$56,000, gold bonds.

N. C., Raleigh—Local Government Comsn., Chas. M. Johnson, Raleigh, opens bids Sept. 29 for \$175,000, not to exceed 6%, \$1000 denom. Raleigh coupon or registered funding bonds.

Okla., Talgoa—Dewey County Comms. may call election on \$50,000 public works bonds.

Tenn., Memphis—City, D. C. Miller, Clk., sell \$270,000 front foot assessment bonds about Oct. 22.

Tex., Alice—City voted \$36,000 bonds; \$26,000 to retire indebtedness, and \$10,000 for water works improvements. 8-27

Tex., Crystal City—City, A. F. Hancock, City Mgr., votes Sept. 29 on \$128,863 power plant bonds. 9-17

Tex., Dallas—City Comsn., John N. Edy, City Mgr., soon sell \$700,000, 4¼% sanitary sewer and paving bonds and probably sell \$55,000, 4¼% school bonds.

Tex., El Paso—City, W. E. Stockwell, City Plan Engr., advises city has no plans for \$1,117,000 bond issue. 9-17

Tex., Houston—Harris County, H. L. Washburn, County Aud., opens bids Oct. 1 for \$2,000,000 road bonds.

Tex., Lampasas—City recently voted \$12,000 city hall bonds. 8-13

Tex., Taylor—City Comsn. passed ordinance authorizing issuance \$20,000 school warrants.

Tex., Wellington—City, W. W. Neeley, Mayor, voted \$65,000 gas plant bonds. 7-28

## Bond Issues Sold

Ala., Mobile—City Comsn. sold \$125,000 coupon or registered bonds to Magnus & Co., Cincinnati, Ohio, at par; \$75,000, 5%, airport; \$50,000, public works refunding as 6s. 9-10

Ark., Monticello—Drew County, W. E. Spencer, Judge, sold \$150,000 courthouse bonds to Simmons National Bank, Pine Bluff.

La., Monroe—Ouachita Parish sold \$240,000 Ouachita Parish Jr. College certificates of indebtedness to McNear & Co., Chicago.

Md., Baltimore—City, Eugene H. Beer, City Register, sold \$6,827,000, 4% coupon bonds to syndicate composed of Alexander Brown & Sons, Baltimore; Chase Harris Forbes Corp., Brown Bros. Harriman & Co., Emanuel & Co., L. F. Rothschild & Co., R. H. Moulton & Co., all New York; First Detroit Co. and Guardian Detroit Co., both Detroit, Mich., at 106.877.

Md., Cumberland—City, Samuel Wertheimer, Commr. of Finance and Revenue, sold \$40,000, 4½% sewer bonds to Stein Bros. & Boyce and Mercantile Trust Co., both Baltimore, at 107.819. 9-3

Md., Cumberland—Allegany County Comms., Thomas P. Richards, Clk., sold \$60,000 4½%, \$1000 denom. memorial hospital bonds to Alexander Brown & Sons, Baltimore, at 104.482. 9-3

N. C., Lumberton—Local Government Comsn., Raleigh, sold \$112,000 Robeson County road bonds to Thompson Ross & Co., Chicago, Ill., 5% int., at \$112,667. 9-10

N. C., Tarboro—City recently sold \$25,000, 6% revenue anticipation notes to Cabarrus Bank & Trust Co., Concord, at 100.10.

N. C., Winston-Salem—City, through Local Government Comsn., Raleigh, sold \$1,434,000 funding, refunding and water bonds to Wachovia Bank & Trust Co., Winston-Salem, National City Co., and Chase Harris Forbes Corp., both New York, at \$1,434,430.20, with 4¾% interest rate. 9-10

Tenn., Nashville—State Funding Bd., Ida Lee Richardson, Asst. Sec., sold \$500,000 Western State Hospital bonds to syndicate composed of Chemical Securities Corp., New York; First Securities Corp., Memphis, and Equitable Securities Corp., Nashville, at \$501,500, with int. at 4¾%.

Tex., Dallas—City, Earl Goforth, City Sec., sold \$800,000, 4½% bonds to syndicate composed of Mercantile Commerce Co., St. Louis, Mo.; Ames, Emerich & Co., Chicago, Ill.; Stern Bros. & Co., Kansas City, Mo.; First National Securities Corp., Dallas, and Alamo National Co., San Antonio, at 103.251. 9-10

Tex., Dumas—Moore County, reported, sold \$98,000, 5¼%, \$1000 denom. courthouse refunding bonds recently to Bosworth, Chantre, Loughbridge & Co., Denver, Colo.

Tex., El Paso—City, G. R. Daniels, City Aud., sold \$1,500,000 funding bonds to Glassell, Vieth & Duncan, Davenport, Iowa.

Tex., New Braunfels—City, reported, recently sold \$30,000, 5½% refunding bonds to Van H. Howard Co., San Antonio.

## New Financial Corporations

Mo., East Prairie—First Bank of East Prairie, capital \$25,000, chartered; Donal Danforth, Rhodes E. Cave.

N. C., Chapel Hill—First State Bank, capital \$10,000, chartered; Hubert Scott, Ernest S. Alford.

N. C., Greensboro—Piedmont Regional Clearing House Association organized; E. W. Staples, Exec. V.-Pres., United Bank & Trust Co., Greensboro, elected president; W. C. Idol, Cashier, Wachovia Bank & Trust Co., High Point, named vice-president.

S. C., Columbia—Columbia Finance Co., capital \$50,000, chartered; Charles D. Gordon, Pres., Imperial Hotel.

Chatham Savings Bank, Danville, Va., reorganized and reopened; L. D. Hatch, Cashier; J. Lawson Carter, Pres.

Merchants & Farmers' Bank, J. D. Blanton, Pres., and First National Bank, J. L. Morgan, Pres., both Marion, N. C., merging.

National Bank of Petersburg, Chas. E. Plummer, Pres., and Virginia National Bank, G. C. Wright, Pres., Petersburg, Va., plan merger.

Planter's State Bank, Danbury, N. C., will reopen with T. J. Byerly as president.

Sherman County National Bank, W. T. Mar-

tin, Pres., and First State Bank, L. M. Price, Pres., both Stratford, Tex., merged.

Taylor National Bank, T. O. Morton, Pres., and Farmers & Peoples Bank, Edw. Hill, Pres., both Campbellsville, Ky., merged; T. O. Morton, Pres., G. L. Gowdy, Cashier, new institution.

## \$500,000 Hospital Bonds

Bolivar, Tenn.—Bonds in the amount of \$500,000, bearing an interest rate of 4¾ per cent, have been sold by the Funding Board of the State of Tennessee, Nashville, for the construction of additional buildings here for the Western State Hospital. The purchasers include the Chemical Securities Corporation, New York, First Securities Corporation, Memphis, and the Equitable Securities Corporation, Nashville. The purchase price for the entire issue was \$501,500. Henry C. Hibbs, Nashville, has been commissioned as architect for the buildings.

## May Issue \$1,117,000 Bonds

El Paso, Tex.—Plans are being considered by the city commission to issue 4½ per cent municipal bonds in the amount of \$1,117,000 to take up that amount of outstanding 6 per cent warrants. City Attorney J. H. McBroom is investigating an act passed by the Legislature to determine whether or not the bonds may be issued without submitting the proposal to a vote.

## \$6,827,000 Baltimore Bonds

A banking group headed by Alexander Brown & Sons, Baltimore, has purchased a Baltimore City 4 per cent bond issue of \$6,827,000, at a price of 106.877. Other firms associated with the Brown company include: The Chase Harris Forbes Corporation, Brown Bros. Harriman & Co., Emanuel & Co., L. F. Rothschild & Co., R. H. Moulton & Co., all of New York; First Detroit Company and Guardian Detroit Company, both of Detroit.

Potter & Shackelford, Greenville, S. C., have been awarded general contract to erect the Joseph E. Brown Memorial Library and the Harold Hirsch Law Building for the University of Georgia at Athens, Ga., according to plans by Hentz, Adler & Schutze, architects, with Robert S. Fiske serving as consulting engineer, both of Atlanta, Ga.

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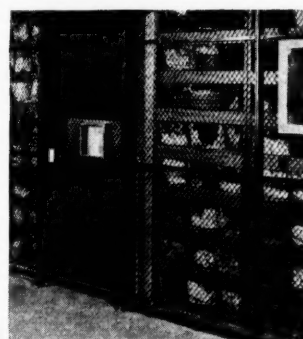
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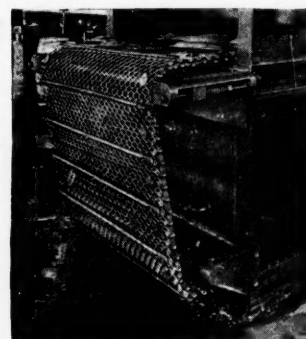
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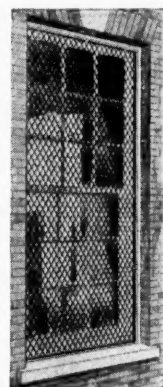
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### Ship Line Establishes Offices in Norfolk

Norfolk, Va.—The Nelson Steamship Co., operating a fleet of steamers in the intercoastal trade, announces through Vice-President F. W. S. Locke that its Eastern executive offices will be moved from New York to Norfolk, because of the increasing volume of cargo moving through Hampton Roads. Major Locke, who is in charge of the New York office, will make his headquarters at the Norfolk office, while the New York office will be continued under the direction of George C. Stern, district freight agent. J. E. Maines has been appointed assistant freight traffic manager with headquarters at Norfolk. George J. Harig, district freight agent, is in charge of the Pittsburgh office and E. L. Mayo is the district freight agent at Baltimore. M. J. Hogan is the Norfolk agent. Present

ports of call on the Atlantic coast of the Nelson Line are New York, Baltimore, Norfolk, and Charleston, with eastbound calls at Jacksonville and Savannah. Service is maintained on the West Coast out of Puget Sound, San Francisco, Portland and Los Angeles.

### Rush \$500,000 Improvements

Miami, Fla.—The Gables Racing Association, Frank J. Bruen, managing director, plans to expend \$500,000 for improvements at the former Coral Gables Kennel Club at Coral Gables. The present grandstand will be moved and new concrete floors constructed, with an areaway in front and a new betting room on the mezzanine. Plans also include a \$100,000 club building, new administration building and paddock, 14 new frame barns, jockeys' quarters, about 3 miles of roads, steel fencing, race track, land-

scaping, etc. Paist & Stewart are the architects and the George W. Langford Co., contractors, both of Miami.



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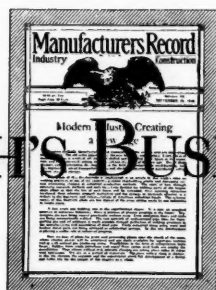
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MARK SULLIVAN, the well known Washington correspondent of the New York Herald-Tribune, in commenting upon the MANUFACTURERS RECORD, said:

"The MANUFACTURERS RECORD is in a sense the official organ of Southern business in the whole area from Maryland to Texas. It is to the South what The Journal of Commerce and The Wall Street Journal combined are to the business circles of New York."



## == THE SOUTH'S BUSINESS PAPER ==

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The MANUFACTURERS RECORD is unique. Its opinion on economic problems of moment is eagerly sought and accepted as authority. *It leads!*

## Combine Factory and Farm Work

House of Representatives

State of Texas.

Austin, Texas.

*Editor Manufacturers Record:*

In recent editorials the MANUFACTURERS RECORD discussed the tendency of industry to locate in smaller centers and urged Southern communities to try to secure more industrial plants. I would like to offer some suggestions in line with the view expressed in the editorials, and also in connection with Mr. Ford's proposal of combining farming and manufacturing.

Mr. Ford's plan, as I understand it, is for the manufacturer to own a large farm near the factory where employees might work part time. A better plan would be for factory owners to purchase a large tract of land suitable for farming near some town or village where the factory could be located, such tract to be cut up into small farms of 25 to 50 acres each. Moderate-priced comfortable homes and other improvements should be placed on these small farms, and a few cows and hogs and poultry, and all necessary teams and tools furnished to each farm, the number depending on the size of the employe owner's family. These farms should be sold to employes on ten years' time, payments to be made monthly, the livestock and farm tools to

be sold on three years' time, payments either weekly or monthly.

The working days in the factory should be six hours only. That would give the employe several hours daily to put in on the farm. This plan would be much better than to divide the work in the factory and on the farm by seasons, as probably contemplated in Mr. Ford's plan.

No argument is needed to prove that individual farm ownership is much preferable to Mr. Ford's plan of one large farm being cultivated by the employes for wages. The latter smacks too much of the Russian plan. If the employe is working for himself on his own home farm, he can and will put in overtime, and will be amply repaid for the extra labor.

It is because of the advantage to accrue from daily labor on the farm, especially as to handling livestock and poultry, that the South is better than other sections of the country for carrying out a combination plan of factory and farm work.

Of all the states in the South perhaps no other will equal Texas for combining factory and farm operations. Large tracts of good farming land can be procured at reasonable prices near towns or cities and within a short haul of the greatest oil field in the world, where fuel oil can be bought cheaper than anywhere else in the United States. Texas has the largest sulphur mines, and sulphur

is extensively used in many manufacturing industries. Texas is the largest producer of many raw materials for manufacture, such as cotton, wool and mohair. Texas also has large supplies of hardwoods as well as soft pines.

J. R. DONNELL.

## Would Stop Imports From Russia

McEwen Lumber Company

High Point, N. C.

*Editor Manufacturers Record:*

Referring to the statement in one of your recent issues by the Honorable James W. Gerard, former ambassador to Germany, I heartily agree with his conclusions and endorse without hesitation his suggestion, namely:

"I see only one solution to the immediate problem, and that is for America to set an example to the world by barring Russian imports from coming into this country."

I emphatically agree with Mr. Gerard that Russia is "waging war on the rest of the world," and we and other countries are furnishing the machinery for them to do it. I hope the United States will indeed take the lead, not only in this but in other world affairs, as our country is entitled to do as a world power.

W. B. McEWEN.



# PROPOSALS

BOND ISSUES

BUILDINGS

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GOOD ROADS



Bids close October 15, 1931.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., September 17, 1931.—SEALED BIDS, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., October 15, 1931, for furnishing all labor and materials and performing all work for the construction of the U. S. post office, etc., at Niles, Ohio. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close October 21, 1931.

OFFICE OF THE ARCHITECT OF THE CAPITOL, Washington, D. C., September 3, 1931. SEALED BIDS will be opened in this office at 3 P. M., Eastern Standard Time, October 21, 1931, for the construction of the new United States Supreme Court Building, to be built on Squares 727 and 728, Washington, D. C. The building as designed, will occupy approximately 103,000 square feet, with approximately 30,000 square feet additional in terraces and driveways; central portion, five stories and basement; side portions, three stories and basement; fireproof construction with marble facing. Drawings and specifications, not exceeding three sets, may be obtained at the Office of the Architect of the Capitol,

## GENERAL INFORMATION

About Proposal Advertising  
in Manufacturers Record

PUBLICATION DAY: Thursday.  
FORMS CLOSE: 10 A. M. Tuesday.

When too late to send copy by regular mail to reach us by 10 A. M. Tuesday, forward by night letter or air mail when possible

## THE DAILY CONSTRUCTION BULLETIN OF THE MANUFACTURERS RECORD

Published every business day, gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Construction Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened or when daily insertions are necessary to meet legal requirements.

The rate is the same for both publications—35 cents a line each insertion.

tol, in the discretion of said Architect by any satisfactory general contractor. A deposit of one hundred (\$100) will be required for each set of drawings and specifications, to insure their return in good condition. The deposit must be a check made payable to the order of David Lynn, Architect of the Capitol. DAVID LYNN, Architect of the Capitol.

Bids close October 8, 1931.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., September 17, 1931.—SEALED BIDS in duplicate subject to the conditions contained herein will be publicly opened in this office at 2 p. m., October 8, 1931, for furnishing all labor and materials and performing all work for new brass water pipe, etc., at the U. S. post office, Oxford, Miss. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931, (Public No. 798). Drawings and specifications may be obtained from the custodian at the building or at this office in the discretion of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close October 14, 1931.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., September 16, 1931.—SEALED BIDS in duplicate subject to the conditions contained herein will be publicly opened in this office at 2 p. m., October 14, 1931, for furnishing all labor and materials and performing all work for new brass water piping, repairs to plumbing, etc., at the U. S. post office, Mobile, Ala. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931, (Public No. 798). Drawings and Specifications may be obtained from the custodian at the building or at this office in the discretion of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close October 23, 1931.

U. S. ENGINEER OFFICE, HUNTINGTON, W. VA.—Sealed bids will be received until 10 A. M., October 23, 1931, and then opened for constructing the second of two locks, powerhouse building and connection to old dam at Marmet, W. Va., on Great Kanawha River, nine miles above Charleston, W. Va. Further information on application.

Bids close October 12, 1931.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., Sept. 14, 1931.—SEALED BIDS in duplicate subject to the conditions contained herein will be publicly opened in this office at 2 p. m., Oct. 12, 1931, for furnishing all labor and materials and performing all work for fire alarm system at the extension 1929 U. S. post office, court house, etc., Brooklyn, New York. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931, (Public No. 798). Drawings and specifications may be obtained from the custodian at the building or at this office in the discretion of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close October 12, 1931.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., September 19, 1931.—SEALED BIDS, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., October 12, 1931, for furnishing all labor and materials and for performing all work for the construction of the U. S. post office, etc., at Greenville, Ala. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close October 14, 1931.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., September 16, 1931.—SEALED BIDS, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., October 14, 1931, for furnishing all labor and materials and performing all work for the extension and remodeling of the U. S. post office, court house, etc., at Elkins, W. Va. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 13, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. Wetmore, Acting Supervising Architect.

Bids close October 15, 1931.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., September 17, 1931.—SEALED BIDS, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., October 15, 1931, for furnishing all labor and materials and performing all work for the construction (except elevators) of the U. S. parcel post building at Jacksonville, Fla. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close October 6, 1931.

SEALED BIDS, in triplicate, subject to the conditions contained herein, will be received by the Veterans Administration, Room 764, Arlington Building, Washington, D. C., until 2.30 P. M., October 6, 1931, and then publicly opened for furnishing all labor and materials and performing all work required for constructing and finishing complete at SOLDIERS' HOME, JOHNSTON CITY, TENNESSEE, HOSPITAL ADDITION, CONNECTING CORRIDOR AND BARRACK BUILDING, including roads, walks, grading and drainage. This work will include excavating, reinforced concrete construction, hollow tile, brick work, cut stone, architectural terra cotta, marble work, floor and wall tile, rubber tile, compressed asphalt tile and linoleum floors, terrazzo, iron work, steel stairs with slate treads, steel shelving, cabinets and partitions, slate, metal and built-up roofing, roof ventilators, metal lathing, plastering, sound deadening, carpentry, metal weatherstrips, insect screens, window shades, painting, glazing, hardware, plumbing, heating, electrical work, electric elevator, and outside sewer, water, gas, steam and electric service connections. SEPARATE BIDS will be received for (a) General Construction; (b) Electric Elevator; all as set forth on bid form. Bids will be considered only from individuals, firms or corporations possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract and in making awards, the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. At the discretion of the Administrator, drawings and specifications may be obtained upon application to the Construction Service, Room 764, Arlington Building, Washington, D. C. While no deposit will be necessary, return of the drawings and specifications within ten days after date of opening bids will be required. In case no bid is to be submitted, the return of plans and specifications, as soon as this fact has been determined, and before the date for opening bids, is requested. Compliance with the requirement and with the request indicated will be considered in connection with future applications for drawings and specifications. GEORGE E. IJAMS, Assistant Administrator.

Bids close September 29, 1931.

### Bridges

DEPARTMENT OF PUBLIC WORKS  
STATE OF MARYLAND  
STATE ROADS COMMISSION

#### NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for construction of bridges as follows:

Montgomery County, Contract No. M-179-37—Single span, concrete slab bridge on the road from Wheaton to Four Corners over Sligo Branch.

Montgomery County, Contract No. M-180-37—Double span, concrete slab bridge on the road from Glenmont to Colesville over Northwest Branch.

Prince George's County, Contract No. P-191-37—Double span, concrete girder bridge on the road from Mt. Rainier to the Queen's Chapel Road on Prospect Avenue over Northwest Branch.

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 29th day of September, 1931, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.  
BY ORDER of the State Roads Commission this 16th day of September, 1931.

G. CLINTON UHL, Chairman.  
L. H. STEUART, Secretary.

Bids close October 13, 1931.

### Bascule Span Superstructures

DEPARTMENT OF PUBLIC WORKS  
STATE OF MARYLAND  
STATE ROADS COMMISSION

#### NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for construction of bascule span superstructures, as follows:

Cecil County—Contract No. Ce-118-27—Double leaf bascule span superstructure, complete, required for the proposed bridge over Bohemia River on the road from Chesapeake City to Cecilton.

Dorchester County—D-84-17—Double leaf bascule span superstructure, complete, required for the proposed bridge over Marshyhope Creek on the road from Rhodesdale to Eldorado at Brookview.

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 13th day of October, 1931, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 15th day of September, 1931.

G. CLINTON UHL, Chairman.  
L. H. STEUART, Secretary.

Bids close September 29, 1931.

### Maryland Highway Work

DEPARTMENT OF PUBLIC WORKS  
STATE OF MARYLAND  
STATE ROADS COMMISSION

#### NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for building four sections of State Highway as follows:

Montgomery County, Contract No. M-183-54—One section of State Highway from Diamonds Corner on the Gaithersburg-Quince Orchard Road toward Old Germantown, a distance of 1.03 mile (Macadam).

Prince George's County, Contract No. P-187-82—One section of State Highway along the Croom Road from the end of Contract No. P-101 to Rock Creek, a distance of 2.17 miles (Gravel).

Prince George's County, Contract No. P-176-32—One section of State Highway through Maryland Park from Central Avenue to the District of Columbia Line, a distance of 0.51 mile (Concrete).

Worcester County, Contract No. Wo-104-12—One section of State Highway along the Berlin-Libertytown Road from the end of Contract No. Wo-90 toward the Wicomico County Line, a distance of 1.0 mile (Concrete).

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 29th day of September, 1931, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 15th day of September, 1931.

G. CLINTON UHL, Chairman.  
L. H. STEUART, Secretary.



# CLASSIFIED OPPORTUNITIES

## MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES

**FOR SALE**—Gold-bearing tract of land in Alabama, 760 acres. Tested and proved. J. H. ALLDREDGE, Agent, Montgomery, Alabama.

### KAOLIN

**FOR SALE**—Millions of tons of Pure White Kaolin. Vein 30 ft. thick three miles long. J. C. HARRISON & CO., Clarksville, Ark.

### COAL

**ANTHRACITE COAL.** Pennsylvania. Large tonnage, unmined. Five Cents per ton. Write for detailed information. A. W. JOHNSON, 513 Hall Bldg., Kansas City, Mo.

### GLASS SAND DEPOSIT

57 ACRES, containing large deposit highest grade glass sand, near Winchester, Va. Quarry fully developed, also lot of sand plant equipment, damaged by fire which destroyed the plant. Sand from this deposit is unsurpassed for manufacturing fine glass ware.

D. H. SENCINDIVER, Trustee, Winchester, Va.

## SOUTHERN ESTATE

**ESTATE FOR SALE**—11 acres on St. Johns River opposite Jacksonville, also 12-room residence in good location, only few blocks from business center of Jacksonville. A. G. Chappell, P. O. Box 392, Jacksonville, Fla.

**IN THE SHENANDOAH VALLEY**  
223 Acres, smooth, level, highly productive limestone soil, along highway and on R. R., two miles of city; this is the best combination, orchard, stock and general farm in valley; 30 acres apples in full bearing; has now heavy crop, 90% Yorks; 40 acres blue grass pasture, running spring water in buildings, fields and barnyard.

12-room brick mansion, slate roof, full basement and open fireplaces; in 4-acre lawn; 55x125 hip roof bank barn. Owner old, feeble and in poor health; can show better than \$5000 net yearly income for 9 years; selling at sacrifice to arrange his affairs. \$30,000; only \$5000 cash required. Will include apple crop and half farm crops.

W. T. BIRMINGHAM, Winchester, Va.

## BUSINESS OPPORTUNITIES

**LONG TERM LOANS**, large amounts, made on industrial, mercantile, sawmill properties. THOS. W. GILMER, Attorney, Bay Minette, Alabama.

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Unlimited Opportunities In Manufacturing—Mining—Oil—Write Me  
A. R. ANDERSON, Box 2551, Dallas.

**FOR SALE**—Large Well-Drilling Business, now doing \$100,000 a year. Priced cheap. Selling due to ill-health. Everything fine order. Money Maker. Address No. 9136, care of Manufacturers Record, Baltimore.

## MOVING AHEAD

Parkersburg has worked out of the depression. Diversified industry did it. Locate your factory here at the gateway to the Central West and South.

**BOARD OF COMMERCE.**  
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**CONDITIONS:** No patent medicine, oil or mining stock advertisements or questionable or undesirable advertisements will be accepted. The assistance of our readers in excluding undesirable advertisements is requested. No display type used.

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**FOR SALE**—FARM AND INDUSTRIAL SITES. With River, Rail and Highway facilities; 20 miles above New Orleans. Inducements offered. C. B. FERDON, Norco, La.

## FACTORY SITES

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## FACTORY BUILDING

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**COTTON MILL**  
For Quick Sale  
Exceedingly Cheap—Easy Terms  
4 story, standard brick building.  
28 tenant houses.  
2 warehouses, one story brick.  
8,512 spindles.

262 looms, 32", 36" and 40".  
Powered with 360 H.P., new Diesel oil engine.  
Good location as to labor, climate and operating conditions.  
For further information, write No. 9127, care Manufacturers Record, Baltimore, Md.

## PATENT ATTORNEYS

**PAUL B. EATON**, Patent Attorney  
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1389 Press Building, Washington, D. C.  
417 Wachovia Bldg., Winston-Salem, N. C.

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## PATENT ATTORNEYS

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## AGENCIES WANTED

**FLORIDA MANUFACTURERS' AGENT** desires to add new lines. If you want real sales service communicate with F. M. BOWEN, 114 W. 10th St., Jacksonville, Fla.

**R. P. WALKER**,  
Manufacturers Agent,  
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Desires accounts on commission basis in Washington-Baltimore territory of Manufacturers of reputable materials, appliances, tools, Machines—everything in which building contractors are interested.

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Twenty-two years experience in Government contract work, desires connection with manufacturing company for the purpose of promoting sales of supplies or equipment to the United States Government. References supplied. Address No. 9137, care of Manufacturers Record, Baltimore, Md.

**MANUFACTURERS' AGENT**, Atlanta, Ga. Calling upon Manufacturers, Public Utilities, Steam and Electric Railways, Governmental and Airway Departments, Engineers, Contractors and Architects. Intimately established in Va., No. and So. Carolina, Ga., Fla., Ala. and East Tenn. Wants accounts—Industrial Plants, Supplies and Specialties. Address No. 9138, care of Manufacturers Record, Baltimore.

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**MEN WANTED** who sell fire appliances, to handle a Gasoline Non-Explosive safety valve for use on all gasoline tanks and a line of one and five gallon Non-Explosive gasoline cans.

**EMERSON ENGINEERING CORP.**,  
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**IF YOU ARE OPEN** to overtures for new connection and qualified for a salary between \$2500 and \$25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service of recognized standards and reputation, through which preliminaries are negotiated confidentially for positions of the caliber indicated. The procedure is individualized to each client's personal requirements, your identity covered and present position protected. Established twenty-one years. Send only name and address for details.

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22" Barnes Drill Press BG. PF. .... 115.00  
**CINCINNATI MACHINERY & SUPPLY CO.**,  
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# RESALE DEPARTMENT

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**PIPE NEW**  
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 Overhauled and Tested  
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**PIPE**  
 Rethreaded, reconditioned, guaranteed  
 suitable for all practical purposes,  
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 400,000 ft. in all sizes from 24" to 36" diam.  
 5000 ft. 8" NEW GALVANIZED CORRUGATED  
 pipe in lengths 16 to 20 ft. suitable for  
 exhaust drains, water systems, sewers,  
 conduits, etc., complete with necessary sleeves.  
 Very attractive prices.  
**Marine Metal & Supply Co.**  
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Your bargains listed on these cards will start your  
 idle machinery and surplus materials on the road to  
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 See our full page in the Manufacturers Record of  
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 best bargains listed on these cards. Let us tell you  
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**FOR QUICK RESULTS: List it with**  
**Machinery Record, Richmond, Va.**  
 Subject—Generator unit 50 K.V.A. Erie Ball.  
 Name—Town of Williamston, N. C.  
 Address—Mr. G. H. Harrison, clerk.  
 Location of Item—Williamston, N. C.  
 Date of Listing—August 25th, 1931.  
 Lowest Cash Price—\$300.00 F.O.B. cars.

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 1—175 H.P. 72"x20' hor. ret. tub., 150 lb..  
**AIR COMPRESSORS**  
 676 cu. ft. Ingersoll Rand two stage air compressor,  
 latest type, practically new, synchronous motor driven.  
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 200 KVA 220 volt 3 phase, 60 cycle Burke generator,  
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 generators with Ridgway Engines.  
**O'BRIEN**  
**Machinery Company**  
 115 N. Third St. Philadelphia

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**ALBERT PIPE SUPPLY CO., INC.**  
 NEW-RECLAIMED-USED  
**PIPE**  
 ALL SIZES CUT TO SKETCH  
 AND STOCKED  
 BERRY & NORTH 13th STS.  
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 SERVICE PRICES  
 GUARANTEED

**PIPE WANTED**  
 We are in the market for 6" and 4" cast iron pipe,  
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**JUSTIN MATTHEWS COMPANY**  
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 1—No. 4 Champion Jaw Crusher complete.  
 1—No. 6 Gates crusher complete.  
 Type "B" high lift, 3/4 cu. yd. No. 2379 Erie Steam Shovel fully equipped for bank work.  
 Also new 40' boom and clam shell bucket.  
 Byers "Bearcat" gasoline crane with 26' boom.  
 Ingersoll-Rand 5 1/2 x 5 Air Compressor, 2 paving breakers, 1 Jackhammer, 2 clay diggers, hose on Rubber Wheels in good condition.  
 12 h.p. Jumbo gasoline engine.  
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 4" Diaphragm pumping outfit, 2 h.p. Gas. Eng.  
 Miscellaneous contractors tools of all kinds.  
 1—Diaphragm hand pump.  
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 Two wheel trailer, rubber tires.  
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 Equipment in first-class condition. Sell at very reasonable prices. Will rent the equipment. All located at Richmond, Va.  
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3 Phase—60 Cycle

25 H.P.	900 R.P.M.	220 Volt	Gen. Elec.
35 H.P.	1200 R.P.M.	440 Volt	Gen. Elec.
40 H.P.	600 R.P.M.	220 Volt	Gen. Elec.
50 H.P.	900 R.P.M.	220 Volt	Gen. Elec.
75 H.P.	900 R.P.M.	440 Volt	Gen. Elec.
100 H.P.	900 R.P.M.	220 Volt	Gen. Elec.
125 H.P.	514 R.P.M.	440 Volt	Gen. Elec.
150 H.P.	514 R.P.M.	2300 Volt	Gen. Elec.
200 H.P.	514 R.P.M.	440 Volt	Gen. Elec.
250 H.P.	514 R.P.M.	440 Volt	Gen. Elec.

Hundreds of other machines. A.C. and D.C. squirrel cage, synchronous, etc., available for immediate shipment, all completely rebuilt and fully guaranteed. Complete stock list—Bulletin No. 39 mailed free on request.

**Rockford Power Machinery Company**

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*Quick Delivery and Low Prices*



A complete stock of transformers 1 to 1000 kva. Modern methods make our repair service second to none. Special service on breakdown jobs.

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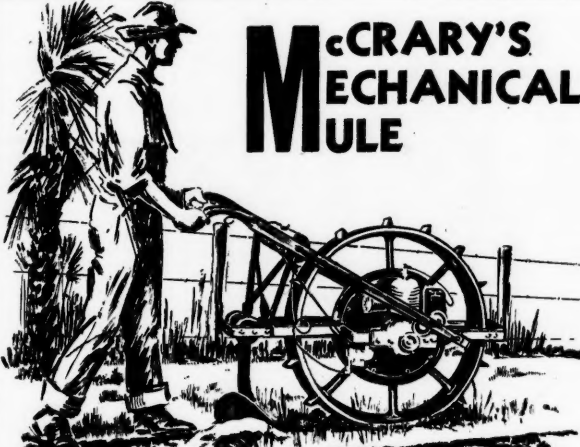
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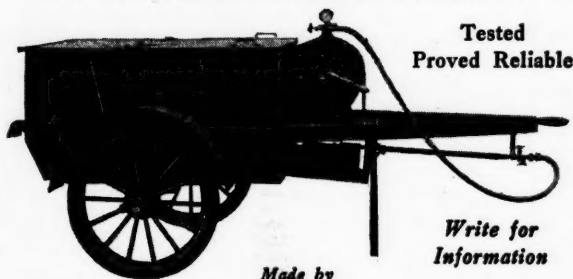
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**MANUFACTURERS RECORD**  
Baltimore, Maryland



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Greater Digging Power  
Faster Operation  
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Guaranteed Against Breakage

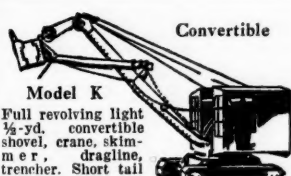
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Convertible  
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Full revolving light  
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shovel, crane, skim-  
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3/4 yd. to 1 yd. capacity  
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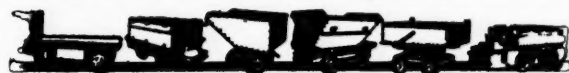


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Washed Sand and Gravel for Concrete  
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## On EAST COAST of FLORIDA

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*A DEFINITE* contract  
*FOR a DEFINITE* period of years  
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This is a *definite* and *exclusive* characteristic.

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**RATE, for Large Consumers  $\frac{1}{2}$  to  $\frac{3}{4}$  cents per Kilo-watt-Hour.**

**NO DEMAND**

**NO MINIMUM**

RAW Materials and suitable labor available for Cotton Mills,  
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 Ideal Climate.  
 Native Born Non-Union Labor.  
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 Free taxes (5 years) to certain industries.

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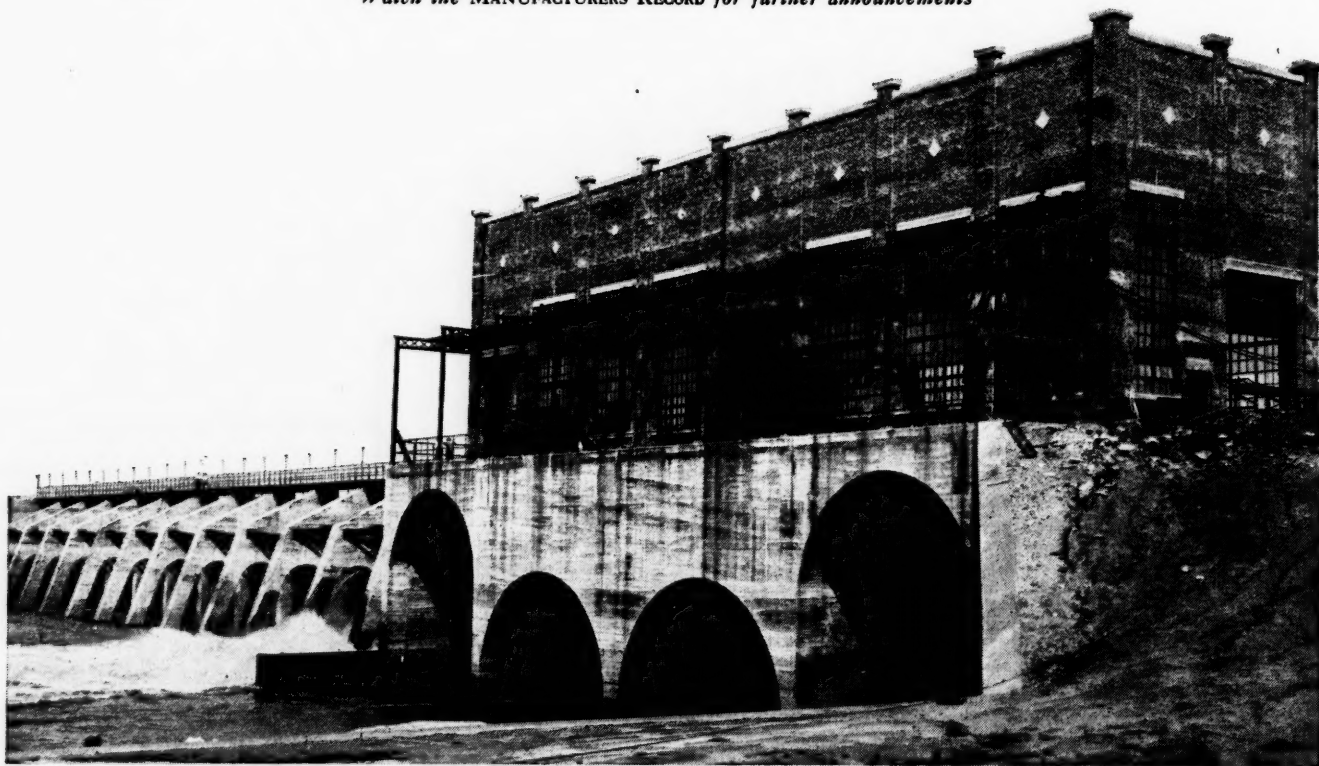
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 Good Schools.  
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 Pure Artesian Water.  
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 Climate Ideal.

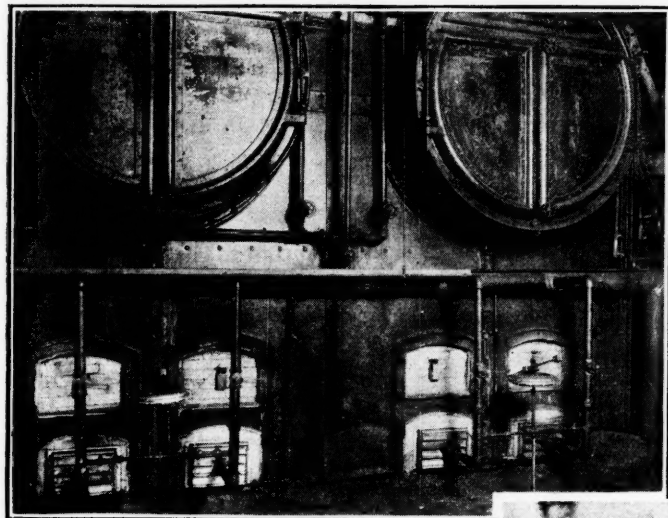
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## —(Material Handling.)

Owen Bucket Co., Cleveland, O.

## —(Ore Handling.)

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Stuebner Iron Works, G. L., Long Island City, N. Y.

## —(Rehandling.)

Owen Bucket Co., Cleveland, O.

## —(Sand and Gravel.)

Owen Bucket Co., Cleveland, O.  
Williams Company, G. H., Erie, Pa.

## BUILDERS and Contractors.

Cowper Co., Inc., John W., Washington, D. C.  
Lockwood Greene Engrs., Inc., Boston.  
Moyer Co., Tilghman, Allentown, Pa.  
Thompson & Bros., T. C., Charlotte, N. C.  
White Engineering Corp., J. G., New York.

## BUILDINGS (Industrial.)

Belmont Iron Works, Philadelphia, Pa.  
Blaw-Knox Co., Pittsburgh, Pa.  
Ingalls Iron Works Co., Birmingham.  
McClintic-Marshall Co., Pittsburgh, Pa.  
Virginia Bridge & Iron Co., Roanoke, Va.

## —(Portable Sheet Metal.)

Birmingham Tank Co., Birmingham.

## BULKHEADS.

Shore-Line Builders, Inc., Jacksonville, Fla.  
Snare Corp., Frederick, New York, N. Y.

## BULLDOZERS.

Trackson Co., Milwaukee, Wis.

## BURLAP.

Fulton Bag & Cotton Mills, Atlanta, Ga.

## BUSINESS METHODS.

Ernst & Ernst, New York, N. Y.

## CABLE (Elevator.)

American Steel & Wire Co., Chicago, Ill.  
Reebing's Sons Co., John A., Trenton, N. J.

## —and Wire (Electric.)

American Steel & Wire Co., Balto., Md.  
Reebing's Sons Co., John A., Trenton, N. J.  
Western Electric Co., New York City.

## CALCIUM CHLORIDE.

Grasselli Chemical Co., Inc., Birmingham.

## CAN and Box-Making Machinery (Tin.)

Bliss Co., E. W., Brooklyn, N. Y.

## CANNING MACHINERY.

Robins & Co., A. K., Baltimore, Md.

## CANVAS.

Fulton Bag & Cotton Mills, Atlanta, Ga.

## CARS (Dump, Industrial, Logging and Mine.)

Atlas Car & Mfg. Co., The, Cleveland, O.  
Southern Iron & Equipment Co., Atlanta.

## CASSIONS (Foundations, Water Wells, etc.)

United Welding Co., Middletown, O.

## CASTINGS (Alloy.)

Mountain State Steel Foundries, Parkersburg, W. Va.

## —(Brass, Bronze and Aluminum.)

Richmond Foundry & Mfg. Co., Richmond, Va.  
Savannah Mch. & Fdy. Co., Savannah, Ga.

## —(Chilled Iron.)

Fuller Lehigh Co., Fullerton, Penna.

## —(Gray Iron.)

Fuller Lehigh Co., Fullerton, Penna.  
Glamorgan Pipe & Fdy. Co., Lynchburg, Va.  
Jefferson Foundry Co., Birmingham, Ala.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Salem Fdy. & Mch. Wks., Salem, Va.  
Savannah Mch. & Fdy. Co., Savannah, Ga.  
Schofield's Sons Co., J. S., Macon, Ga.  
U. S. Pipe & Foundry Co., Burlington, N. J.

## —(Malleable Iron and Steel.)

Timken Roller Bearing Co., Canton, O.

## —(Semi-Steel.)

Jefferson Foundry Co., Birmingham, Ala.  
Salem Fdy. & Mch. Wks., Salem, Va.

## —(Steel.)

Bethlehem Steel Co., Bethlehem, Pa.  
Crucible Steel Casting Co., Lansdowne, Delaware Co., Pa.  
Lunkensheimer Co., Cincinnati, Ohio.  
Mountain State Steel Foundries, Parkersburg, W. Va.

## CEMENT Machinery.

Traylor Engr. & Mfg. Co., Allentown, Pa.

## CHAIN BLOCKS (See Blocks, Chain.)

**TITUSVILLE** POWER AND  
THE HEATING BOILERS  
TITUSVILLE FOR ALL  
IRON WORKS CO. INDUSTRIAL REQUIREMENTS  
TITUSVILLE, PENNA.

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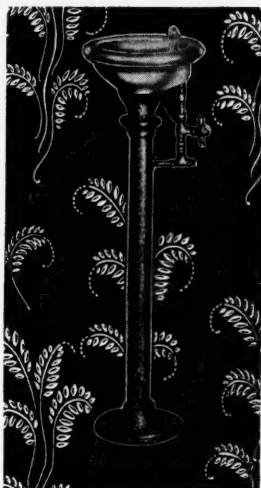
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**GULF REFINING CO.**



**CHAINS (High Speed Roller.)**  
Diamond Chain & Mfg. Co., Indianapolis.

—(Silent Drive.)  
Diamond Chain & Mfg. Co., Indianapolis.

**CHAIRS (Opera and Theatre.)**  
Andrews Co., A. H. Chicago, Ill.

**CHEMICALS.**  
Davison Chemical Co., Baltimore, Md.  
Grasselli Chemical Co., Inc., Birmingham.

**CHEMISTS, CHEMICAL ENGINEERS (Analytical.)**

Barrow-Agee Laboratories, Memphis, Tenn.  
Froehling & Robertson, Inc., Richmond, Va.  
Hunt Co., Robert W., Chicago, Ill.  
Longdale Laboratories, Inc., Richmond, Va.  
Meigs, Bassett & Slaughter, Phila., Pa.  
Moss, Jr., W. Wade, Columbus, Ga.  
Picard Laboratories, Birmingham, Ala.  
Pittsburgh Testing Laboratories, Pittsburgh, Pa.  
Southwestern Laboratories, Fort Worth, Tex.  
Stillman & Van Sielen, New York.

—(Consulting, Paper Industry.)  
Froehling & Robertson, Inc., Richmond, Va.

**CHIMNEYS (Concrete.)**  
Rust Engineering Co., Birmingham, Ala.

—(Radial Brick.)  
Northwestern Chimney Constr. Co., Cleveland, O.  
Rust Engineering Co., Birmingham, Ala.

—Inspected and Repaired.  
Northwestern Chimney Constr. Co., Cleveland, O.

**CHLORIDE ACCUMULATOR.**  
Electric Storage Battery Co., Phila., Pa.

**CHUTES.**  
Cutler Mail Chute Co., Rochester, N. Y.

**CLUTCHES (Friction.)**  
Caldwell Co., Inc., W. E., Louisville, Ky.

**COAL (Bituminous.)**  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

—and Ash-Handling Mch.  
Northwest Engineering Co., Chicago.

—Jigs.  
Steward Machine Co., Chas. C., Birmingham, Ala.

—Tipples.  
American Bridge Co., New York, N. Y.  
Virginia Bridge & Iron Co., Roanoke, Va.

—Washers.  
Steward Machine Co., Chas. C., Birmingham, Ala.

**COCKS (Service.)**  
Marco Nordstrom Valve Co., San Francisco, Calif.

**COKE.**  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

**COLUMNS (Cast Iron.)**  
U. S. Pipe & Fdry. Co., Burlington, N.J.

**CONCRETE Construction (Reinforced.)**  
Cement Gun Construction Co., Chicago.  
Rust Engineering Co., Birmingham, Ala.

—Floor Slabs.  
Federal-American Cement Tile Co., Chicago.

—Mixers.  
Dunning & Boschart Press Co., Inc., Syracuse, N. Y.

—Pipe Machinery (See Pipe Machinery, Concrete.)

—Roofing Tile.  
Federal-American Cement Tile Co., Chicago.

**CONDENSERS.**  
Manistee Iron Works Co., Manistee, Mich.

**CONDUITS (Electric, Interior, Steel.)**  
Western Electric Co., New York, N. Y.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

**CONTRACTORS (Bridge.)**  
Hardaway Contracting Co., Columbus, Ga.

Kansas City Bridge Co., Kansas City, Mo.  
Snare Corp., Frederick, New York.

—(Drainage and Dredging.)  
Arundel Corp., The, Baltimore, Md.  
Atlantic Gulf and Pacific Co., New York.

—(Electrical.)  
Virginia Engineering Co., Inc., Newport News, Va.  
Walker Electrical Co., Atlanta, Ga.  
Warner Service Co., Knoxville, Tenn.  
Webb Electric Co., Anderson, S. C.

—(Foundations and Dams.)  
Snare Corp., Frederick, New York, N. Y.

—(General.)  
Blair, Algernon, Montgomery, Ala.  
Burkes, Inc., J. V. & E. T., New Orleans.  
Cornell Young Co., Inc., Macon, Ga.  
Couper Co., Inc., John W., Washington, D. C.  
Fiske-Carter Constr. Co., Greenville, S. C.  
Saville, Inc., Allen J., Richmond, Va.  
Smallman-MacQueen Construction Co., Birmingham.  
Snare Corp., Frederick, New York, N. Y.  
Thompson & Bros., T. C., Charlotte, N. C.  
Tucker & Laxton, Charlotte, N. C.  
Virginia Engineering Co., Inc., Newport News, Va.  
White Engineering Corp., J. G., New York.

—(Industrial Buildings.)  
Blair, Algernon, Montgomery, Ala.  
Couper Co., Inc., John W., Washington, D. C.  
Fiske-Carter Constr. Co., Greenville, S. C.  
Lockwood Greene Engrs., Inc., Boston.  
Smallman-MacQueen Construction Co., Birmingham.  
Snare Corp., Frederick, New York, N. Y.  
Thompson & Bros., T. C., Charlotte, N. C.  
Tucker & Laxton, Charlotte, N. C.  
Virginia Engineering Co., Inc., Newport News, Va.  
White Engineering Corp., J. G., New York.

—(Mill Village.)  
Hornbuckle Contracting Co., Atlanta, Ga.

—(Power Piping.)  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Pos Piping & Heating Co., Greenville, S. C.

—(Power Plants.)  
Snare Corp., Frederick, New York, N. Y.  
Virginia Engineering Co., Inc., Newport News, Va.

—(Railroad.)  
Cornell-Young Co., Inc., Macon, Ga.

—(Reinforced Concrete.)  
Blair, Algernon, Montgomery, Ala.  
Cement Gun Construction Co., Chicago.  
Gunite Conc. & Constr. Co., Kansas City.  
Tucker & Laxton, Charlotte, N. C.

—(Road and Street Paving.)  
Fiske-Carter Constr. Co., Greenville, S. C.  
Hornbuckle Contracting Co., Atlanta, Ga.  
McCrary Co., J. B., Atlanta, Ga.  
Virginia Engineering Co., Inc., Newport News, Va.

—(Sewerage and Waterworks.)  
Hardaway Contracting Co., Columbus, Ga.  
Hornbuckle Contracting Co., Atlanta, Ga.  
McCrary Co., The J. B., Atlanta, Ga.  
Snare Corp., Frederick, New York, N. Y.  
Tucker & Laxton, Charlotte, N. C.  
Virginia Engineering Co., Inc., Newport News, Va.

—(Sprinkler System.)  
Pos Piping & Heating Co., Greenville, S. C.

—Machinery and Supplies.  
(Used.)  
Adams Mch. Co., T. G., Savannah, Ga.  
Lima Excavator Sales Agency, Lima, Ohio.  
Machinery Record, Richmond, Va.  
Marine Metal & Supply Co., New York.

**CONTRACT WORK WANTED.**  
(See following classifications):  
Boiler and Tank Work.  
Castings.  
Forgings.  
Foundries and Machine Shops.  
Machinery (Special).  
Ornamental Iron Work.  
Patterns.  
Sheet Metal Work.  
Structural Steel and Iron.  
Welding Plants.

**CONVEYING AND ELEVATING MACHINERY.**  
Universal Crusher Co., Cedar Rapids, Ia.

**CONVEYORS (Portable, Power-Driven.)**  
Clark Tractor Co., Battle Creek, Mich.

**COOLING AND HEATING UNITS (Fan.)**  
Niagara Blower Co., New York, N. Y.

**COTTON GIN MACHINERY.**  
Continental Gin Co., Birmingham, Ala.

**COUPLINGS.**  
Goldens' Fdy. & Mch. Co., Columbus, Ga.

—(Flexible.)  
Diamond Chain & Mfg. Co., Indianapolis, Ind.

**CRANES.**  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The, Lorain, Ohio.

—(Cantilever, Gantry.)  
Bedford Foundry & Machine Co., Bedford, Ind.

—(Crawler.)  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The, Lorain, Ohio.

—(Crawling Tractor.)  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The, Lorain, Ohio.

—(Electric Traveling.)  
Bedford Foundry & Machine Co., Bedford, Ind.

—(Full Circle Steam and Electric.)  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The, Lorain, Ohio.

—(Gasoline.)  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The, Lorain, Ohio.

—(Locomotive.)  
Bucyrus-Erie Co., So. Milwaukee, Wis.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The, Lorain, Ohio.

—(Material Handling.)  
Bay City Shovels, Inc., Bay City, Mich.  
Industrial Brownhoist Corp., Cleveland, O.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The, Lorain, Ohio.  
Universal Crane Co., Lorain, Ohio.

**CRAWLERS (Tractor.)**  
Trackson Co., Milwaukee, Wis.

**CREOSOTED MATERIALS.**  
Amer. Creosote Wks., Inc., New Orleans.  
Atlantic Creosoting Co., Norfolk, Va.

**CREOSOTED TIMBER.**  
Ayer & Lord Tie Co., Chicago, Ill.  
Brown Wood Preserving Co., Louisville, Ky.

**CREOSOTE OIL.**  
Amer. Creosote Wks., Inc., New Orleans.  
Ayer & Lord Tie Co., Inc., Chicago.

**CREOSOTING (Wood Material.)**  
Amer. Creosote Wks., Inc., New Orleans.  
Amer. Creosoting Co., Inc., Louisville, Ky.  
Atlantic Creosoting Co., Norfolk, Va.  
Brown Wood Preserving Co., Louisville, Ky.  
Eppinger & Russell Co., New York, N. Y.  
Gulf States Creos. Co., Hattiesburg, Miss.

**CROSS-ARMS (Creosoted.)**  
Amer. Creosote Wks., Inc., New Orleans.  
Amer. Creosoting Co., Inc., Louisville, Ky.  
Atlantic Creosoting Co., Norfolk, Va.

—(Zinc Meta Arsenite Treated.)  
Curtin-Howe Corp., New York, N. Y.

**CROSS-TIES (Creosoted.)**  
Amer. Creosote Wks., Inc., New Orleans.  
Amer. Creosoting Co., Inc., Louisville, Ky.  
Atlantic Creosoting Co., Norfolk, Va.  
Ayer & Lord Tie Co., Inc., Chicago.  
Eppinger & Russell Co., New York, N. Y.

—(Zinc Meta Arsenite Treated.)  
Curtin-Howe Corp., New York, N. Y.

**CRUSHED STONE (Road Concrete and Ballast.)**  
American Limestone Co., Knoxville, Tenn.  
Boxley & Co., W. W., Roanoke, Va.

**CRUSHERS (Coal and Coke.)**  
Fuller Lehigh Co., Fullerton, Pa.  
Steward Machine Co., Chas. C., Birmingham, Ala.

—(Rock.)  
Gruendler Crusher & Pulverizer Co., St. Louis, Mo.  
Universal Crusher Co., Cedar Rapids, Ia.

**CRUSHING and Pulverizing Machinery.**  
Allis Chalmers Mfg. Co., Milwaukee, Wis.  
Fuller Lehigh Co., Fullerton, Pa.  
Gruendler Crusher & Pulverizer Co., St. Louis, Mo.  
Traylor Engr. & Mfg. Co., Allentown, Pa.  
Universal Crusher Co., Cedar Rapids, Ia.

**CULTIVATORS (Mechanical.)**  
Federal Farm Equipment Co., Jacksonville, Fla.

**CULVERT PIPE (Cast Iron.)**  
Amer. Cast Iron Pipe Co., Birmingham.  
Cast Iron Pipe Research Assn., Chicago.  
U. S. Pipe & Foundry Co., Burlington, N. J.

—(Corrugated Metal.)  
American Sheet & Tin Plate Co., Pittsburgh, Pa.

**CYLINDERS (Compressed Air, Gas.)**

National Tube Co., Pittsburgh, Pa.  
—(Creosoting.)  
Alco Products, Inc., New York, N. Y.

**DESKS (School.)**  
Andrews Co., A. H., Chicago, Ill.

**DITCHING MACHINERY.**  
Bay City Shovels, Inc., Bay City, Mich.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.

**DOORS (Bronze.)**  
Michaels Art Bronze Co., Covington, Ky.

—(Fire.)  
Merchant & Evans Co., Philadelphia, Pa.

—(Fireproof, Air Chamber.)  
Wilson Corp., The J. G., New York.

—(Kalamine and Hollow Metal.)  
Cincinnati Mfg. Co., Cincinnati, O.

—(Revolving.)  
Michaels Art Bronze Co., Covington, Ky.

—(Rolling, Steel and Wood.)  
Wilson Corp., The J. G., New York.

—(Vault.)  
York Safe & Lock Co., York, Penna.

**DRAFTSMEN'S SUPPLIES.**  
Weber Co., Inc., F., Philadelphia, Pa.

**DRAGLINE EXCAVATORS.**  
Bucyrus-Erie Co., So. Milwaukee, Wis.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The, Lorain, Ohio.

**DREDGES (Dipper, Elevator, Hydraulic.)**  
Bay City Shovels, Inc., Bay City, Mich.  
Bucyrus-Erie Co., So. Milwaukee, Wis.

**DREDGING (River and Harbor Improvement.)**  
Arundel Corp., The, Baltimore, Md.  
Atlantic Gulf and Pacific Co., New York.

**DRILLING CONTRACTORS.**  
Kennedy-Blegger Drilling Co., New York City.  
Mott Core Drilling Co., Huntington, W. Va.  
Myers & Sons, J. L., Denton, Texas.  
Pennsylvania Drilling Co., Pittsburgh, Pa.  
Southern Drilling Co., Saltville, Va.  
Sprague & Henwood, Inc., Scranton, Pa.

**DRILLS (Oil and Artesian Well.)**  
Virginia Machinery & Well Co., Inc., Richmond, Va.

**DRINKING FOUNTAINS.**  
Rundie-Spence Mfg. Co., Milwaukee, Wis.

**DROP-FORGING MACHINERY.**  
Bliss Co., E. W., Brooklyn, N. Y.

**DRYERS (Gravel and Sand.)**  
Ripley Fdy. & Mch. Co., Ripley, Ohio.

**DRYING MACHINERY.**  
Chicago Bridge & Iron Wks., Birmingham.

**DUSTPROOFING (Concrete.)**  
Sonnenborn Sons, Inc., L., New York.

**DYNAMITE (Industrial and Agricultural.)**  
Du Pont De Nemours & Co., Inc., E. I. Wilmington, Del.

**ECONOMIZERS (Fuel.)**  
Babcock & Wilcox Co., New York.

**ECONOMISTS (Administrative.)**  
Brookline Economic Service, New York.

**ELECTRICAL Instruments and Supplies.**  
General Electric Co., Schenectady, N. Y.  
Western Electric Co., New York City.

—Machinery (Generators, Motors, etc., New.)  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Fairbanks, Morse & Co., Chicago, Ill.  
General Electric Co., Schenectady, N. Y.  
Partridge, Arthur S., St. Louis, Mo.  
Rockford Power Mch. Co., Rockford, Ill.

—Machinery (Generators, Motors, etc., Used.)  
Delta Equipment Co., Philadelphia, Pa.  
Electric Service Co., Cincinnati, Ohio.

—General Electric Co., Schenectady, N. Y.  
O'Brien Machinery Co., The, Phila., Pa.  
Rockford Power Mch. Co., Rockford, Ill.

—Machinery Repairing (Motors, Generators, etc.)  
Electric Service Co., Cincinnati, Ohio.

**ELECTRIC LIGHTING.**  
Westinghouse Lamp Co., New York City.**ELECTRIC SHOVELS (See Shovels.)****ELEVATORS (Electric.)**

American Elevator &amp; Machine Co., Inc., Louisville, Ky.

Millner Co., St. Louis, Mo.

**—(Hand and Belt Power.)**

American Elevator &amp; Machine Co., Inc., Louisville, Ky.

Millner Co., St. Louis, Mo.

**—(Hydraulic.)**

American Elevator &amp; Machine Co., Inc., Louisville, Ky.

**ENGINEERS (Airports.)**

Lockwood Greene Engrs., Inc., New York.

MacElwae &amp; Crandall, Inc., Cambridge, Mass.

**—(Appraisal.)**

Lockwood Greene Engrs., Inc., New York.

Main, Inc., Chas. T., Boston, Mass.

Sanderson &amp; Porter, New York, N. Y.

Wadleigh &amp; Bailey, Washington, D. C.

White Engineering Corp., J. G., New York.

Whitman, Requaardt &amp; Smith, Balto., Md.

Wiedeman and Singleton, Inc., Atlanta.

**—(Bridge.)**

Gardner &amp; Howe, Memphis, Tenn.

Greiner &amp; Co., J. E., Baltimore, Md.

Hardaway Contracting Co., Columbus, Ga.

Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.

Southern Erectors, Inc., Tampa, Fla.

Steel &amp; Lobley, Knoxville, Tenn.

Turner, C. A. P., Minneapolis, Minn.

Virginia Bridge &amp; Iron Co., Roanoke, Va.

Wheeler, Walter H., Minneapolis, Minn.

Whitman, Requaardt &amp; Smith, Balto., Md.

Wiley &amp; Wilson, Lynchburg, Va.

**—(Chemical.)**

Barrow-Agee Laboratories, Memphis, Tenn.

Dow &amp; Smith, New York, N. Y.

Moss, Jr., W. Wade, Columbus, Ga.

Picard Laboratories, Birmingham, Ala.

Pittsburgh Testing Laboratories, Pittsburgh, Pa.

**—(Civil.)**

Gardner &amp; Howe, Memphis, Tenn.

Greiner &amp; Co., J. E., Baltimore, Md.

Harbub Engr. Co., C. N., Nashville, Tenn.

Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.

Hills and Youngberg, Jacksonville, Fla.

Huey, S. E., Monroe, La.

MacElwae &amp; Crandall, Inc., Cambridge, Mass.

Main, Inc., Chas. T., Boston, Mass.

Steel &amp; Lobley, Knoxville, Tenn.

White Engineering Corp., J. G., New York.

Whitman, Requaardt &amp; Smith, Balto., Md.

Wiley &amp; Wilson, Lynchburg, Va.

**—(Consulting.)**

Barstow &amp; Co., W. S., New York City.

Converse &amp; Co., J. B., Mobile, Ala.

Cramer, Robert, Milwaukee, Wis.

Engineering Service Corp., Houston, Tex.

Goder, Joseph, Chicago, Ill.

Harza Engineering Co., Chicago.

Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.

Lockwood Greene Engrs., Inc., New York.

Main, Inc., Chas. T., Boston, Mass.

White Co., Gilbert C., Durham, N. C.

Wiley &amp; Wilson, Lynchburg, Va.

**—(Electric-Light and Power Plants.)**

Barstow &amp; Co., W. S., New York City.

Byllesby Engineering and Management Corp., Chicago, Ill.

Cramer, Robert, Milwaukee, Wis.

Lee Engineering Corp., William S., Charlotte, N. C.

Main, Inc., Chas. T., Boston, Mass.

Sanderson &amp; Porter, New York, N. Y.

Scotfield Engineering Co., Philadelphia.

Tucker &amp; Laxton, Charlotte, N. C.

White Engineering Corp., J. G., New York.

White Co., Gilbert C., Durham, N. C.

Wiley &amp; Wilson, Lynchburg, Va.

**—(Flood Control.)**

Harza Engineering Co., Chicago.

**—(Gas.)**

Byllesby Engineering and Management Corp., Chicago, Ill.

Huey, S. E., Monroe, La.

**—(Geological.)**

Froehling &amp; Robertson, Richmond, Va.

Moss, Jr., W. Wade, Columbus, Ga.

Wadleigh &amp; Bailey, Washington, D. C.

**—(Harbor Improvements.)**

Engineering Service Corp., Houston, Tex.

**—(Heating.)**

Wiley &amp; Wilson, Lynchburg, Va.

**—(Hydraulic.)**

Alpaugh &amp; Sons, Chas. W., Manassas, Va.

Harza Engineering Co., Chicago.

Main, Inc., Chas. T., Boston, Mass.

Sanderson &amp; Porter, New York, N. Y.

Scotfield Engineering Co., Philadelphia.

Sirrime &amp; Co., J. E., Greenville, S. C.

Tucker &amp; Laxton, Charlotte, N. C.

White Engineering Corp., J. G., New York.

Whitman, Requaardt &amp; Smith, Balto., Md.

Wiley &amp; Wilson, Lynchburg, Va.

**—(Ice and Refrigerating.)**

Engineering Service Corp., Houston, Tex.

**—(Industrial Plants.)**

Barstow &amp; Co., W. S., New York City.

Consoer, Older &amp; Quinlan, Inc., Chicago.

Converse &amp; Co., J. B., Mobile, Ala.

Gardner &amp; Howe, Memphis, Tenn.

Greiner &amp; Co., J. E., Baltimore, Md.

Hills and Youngberg, Jacksonville, Fla.

Lockwood Greene Engrs., Inc., New York.

MacElwae &amp; Crandall, Inc., Cambridge, Mass.

Main, Inc., Chas. T., Boston, Mass.

Preacher &amp; Co., Inc., G. Lloyd, Atlanta.

Sanderson &amp; Porter, New York, N. Y.

Scotfield Engineering Co., Philadelphia.

Sirrime &amp; Co., J. E., Greenville, S. C.

Smith, Elroy G., Augusta, Ga.

Turner, C. A. P., Minneapolis, Minn.

Wiley &amp; Wilson, Lynchburg, Va.

**—(Industrial Survey.)**

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Lockwood Greene Engrs., Inc., New York.

Wadleigh &amp; Bailey, Washington, D. C.

**—(Inspection and Tests.)**

Barrow-Agee Laboratories, Memphis, Tenn.

Cramer, Robert, Milwaukee, Wis.

Dow &amp; Smith, New York, N. Y.

Froehling &amp; Robertson, Inc., Richmond, Va.

Hunt Co., Robert W., Chicago, Ill.

McCallum Inspection Co., Norfolk, Va.

Moss, Jr., W. Wade, Columbus, Ga.

Picard Laboratories, Birmingham, Ala.

Pittsburgh Testing Laboratories, Pittsburgh, Pa.

Southwestern Laboratories, Ft. Worth, Tex.

—(Lighting.)

Byllesby Engineering &amp; Management Corp., Chicago, Ill.

Westinghouse Lamp Co., New York City.

Wiley &amp; Wilson, Lynchburg, Va.

—(Mechanical.)

Engineering Service Corp., Houston, Tex.

Lee Engineering Corp., William S., Charlotte, N. C.

Lockwood Greene Engr., Inc., New York.

Main, Inc., Chas. T., Boston, Mass.

Meigs, Bassett &amp; Slaughter, Phila., Pa.

Sanderson &amp; Porter, New York, N. Y.

Wiley &amp; Wilson, Lynchburg, Va.

—(Mining. See Engineers, Geological.)

—(Municipal.)

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Dow &amp; Smith, New York, N. Y.

Harbub Engr. Co., C. N., Nashville, Tenn.

Hills and Youngberg, Jacksonville, Fla.

Huey, S. E., Monroe, La.

Knowles, Inc., Morris, Pittsburgh, Pa.

McCrary Co., The, J. B., Atlanta, Ga.

White Co., Gilbert C., Durham, N. C.

Wiley &amp; Wilson, Lynchburg, Va.

—(Paving and Roads.)

Dow &amp; Smith, New York, N. Y.

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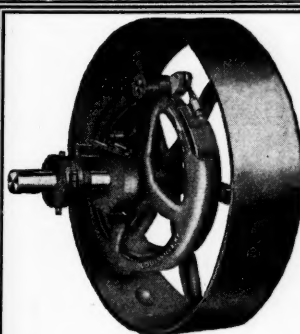
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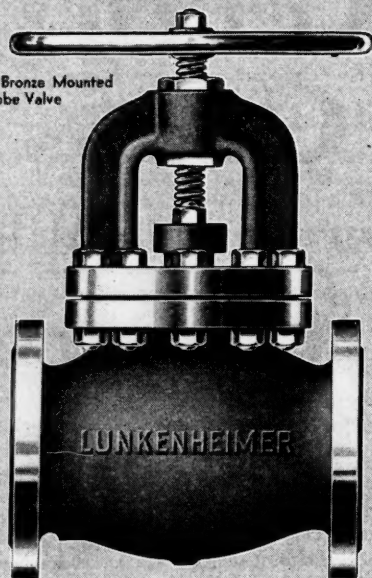
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**MAIL CHUTES.**  
Cutler Mail Chute Co., Rochester, N. Y.

**MARBLE** (Producers and Manu-  
facturers.)  
Georgia Marble Co., The, Tate, Ga.

**METAL-Cutting Machinery.**  
Earle Gear & Machine Co., Phila., Pa.  
—Working Machinery.  
Bliss Co., E. W., Brooklyn, N. Y.  
Ryerson & Son, Inc., Jos. T., St. Louis  
and New York.

**MILL MACHINERY** and **SUP-  
PLIES.**  
Lombard Iron Works & Supply Co., Au-  
gusta, Ga.

**MIXERS** (Asphalt.)  
Erie Machine Shops, Erie, Pa.

—(Hot.)  
Koehring Co., Milwaukee, Wis.

—(Mortar.)  
Chain Belt Co., Milwaukee, Wis.  
Jaeger Machine Co., Columbus, Ohio.

—(Plaster.)  
Chain Belt Co., Milwaukee, Wis.  
Dunning & Boschert Press Co., Syracuse,  
N. Y.  
Jaeger Machine Co., Columbus, Ohio.

**MOTORS** (Electric.)  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Armstrong & Bro. Co., B. S., Atlanta, Ga.  
Fairbanks, Morse & Co., Chicago, Ill.  
General Electric Co., Schenectady, N. Y.  
Western Electric Co., New York City.

**MOTOR TRUCKS.**  
International Harvester Co. of America,  
Inc., Chicago, Ill.

**NAILS** (Cut.)  
Reading Iron Co., Reading, Pa.

—and Spikes.  
American Steel & Wire Co., Balto., Md.  
Tennessee Coal, Iron & Railroad Co.,  
Birmingham, Ala.  
Youngstown Sheet & Tube Co., Youngs-  
town, Ohio.

**NATURAL GAS COMPANIES.**  
(Offering Industrial and Com-  
mercial Opportunities.)  
Southern Natural Gas Corp., Birmingham.

**NURSEBYMEN.**  
Howard-Hickory Co., Hickory, N. C.

**NUTS** (Cold Punched.)  
Oliver Iron & Steel Corp., Pittsburgh, Pa.  
Russell, Burdall & Ward Bolt & Nut  
Co., Port Chester, N. Y.

**OIL** (Fuel and Gas.)  
Gulf Refining Co., Pittsburgh, Pa.

—Cups.  
Lunkenheimer Co., The Cincinnati, O.

**ORE-WASHING MACHINERY.**  
Georgia Iron Works, Augusta, Ga.

**ORNAMENTAL Bronze Work.**  
Heath Co., J. S., Waukegan, Ill.  
Michaels Art Bronze Co., Covington, Ky.

—Iron Work.  
Austin Bros. Bridge Co., Atlanta, Ga.  
Roanoke Iron & Bridge Wks., Roanoke,  
Va.  
Snead Architectural Iron Works, Louis-  
ville, Ky.

Southern Engineering Co., Charlotte, N.C.  
—Metal Work. (Bronze, Iron,  
Steel, etc.)  
Cincinnati Mfg. Co., Cincinnati, O.

**PAINT** (Mill White, for Interior.)  
Sonneborn Sons, Inc., L., New York.

—(Preservative.)  
Cabot, Inc., Samuel, Boston, Mass.

**PANELBOARDS.**  
Adam Electric Co., Frank, St. Louis.

**PARTITIONS** (Sectionfold, Roll-  
ing, Wood.)  
Wilson Corp., The, J. G., New York.

**PATENT ATTORNEYS.**  
Buck, Sterling P., Washington, D. C.  
Coleman, Watson E., Washington, D. C.  
Eaton, Paul B., Charlotte, N. C.  
Sasnett, Edward C., Washington, D. C.  
Seymour & Bright, Washington, D. C.

**PATTERNS** (Drawing, etc.)  
Haas Pattern Co., A. W., Atlanta, Ga.

**PAVING BLOCKS** (Creosoted  
Wood.)  
American Creosote Works, New Orleans.



## —Brick.

National Paving Brick Assn., Washington, D. C.

## —Plant (Asphalt.)

Simplicity System Co., Chattanooga, Tenn.

## PENSTOCKS.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Newport News Shipbuilding & Dry Dock Co., Newport News, Va.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Smith Co., S. Morgan, York, Pa.

## PERFORATED METAL.

Chicago Perforating Co., Chicago, Ill.  
Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perf. Co., Chicago.  
Hendrick Mfg. Co., Carbondale, Pa.  
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.  
Mundt & Sons, Charles, Jersey City, N. J.

## PETROLEUM REFINERS.

Gulf Refining Co., Pittsburgh, Pa.

## PHOSPHATE ACID.

Davison Chemical Co., Baltimore, Md.

## PIG-IRON.

Tennessee Coal, Iron &amp; Railroad Co., Birmingham, Ala.

## PILING (Creosoted.)

Amer. Creosote Wks., Inc., New Orleans.  
Amer. Creosoting Co., Inc., Louisville.  
Atlantic Creosoting Co., Norfolk, Va.  
Ayer & Lord Tie Co., Inc., Chicago.

## —(Steel Sheet.)

Carnegie Steel Co., Pittsburgh, Pa.  
Hyman-Michaels Co., Chicago, Ill.  
Jones & Laughlin Steel Corp., Pittsburgh, Pa.  
Zelnicker Supply Co., W. A., St. Louis.

## —(Yellow Pine.)

Jackson Lumber Co., Lockhart, Ala.

## PILLOW BLOCKS.

Goldens' Fdry. &amp; Mch. Co., Columbus, Ga.

## PIPE.

Albert & Davidson Pipe Corp., Brooklyn, N. Y.  
Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.  
Birmingham Boiler & Engr. Co., Birmingham, Ala.  
Central Pipe & Supply Co., Charleston, W. Va.  
Greenspan's Sons Iron & Steel Co., St. Louis, Mo.  
Hudson Pipe & Supply Co., Bayonne, N. J.  
Maryland Pipe & Steel Corp., Baltimore, Md.  
National Tube Co., Pittsburgh, Pa.  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Power Piping Co., Pittsburgh, Pa.

## —(Cast Iron.)

Amer. Cast Iron Pipe Co., Birmingham.  
Cast Iron Pipe Research Assn., Chicago.  
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.  
U. S. Pipe & Fdry. Co., Burlington, N. J.

## —(Hammer-Welded.)

National Tube Co., Pittsburgh, Pa.

## —(Iron and Steel.)

American Rolling Mill Co., Middletown.

## —(Second-Hand.)

Albert & Davidson Pipe Corp., Brooklyn, N. Y.  
Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.  
Central Pipe & Sup. Co., Charleston, W. Va.  
Greenpoint Iron & Pipe Co., Inc., Brooklyn, N. Y.  
Hudson Pipe & Supply Co., Bayonne, N. J.  
Machinery Record, Richmond, Va.  
Marine Metal & Supply Co., New York.  
Maryland Pipe & Steel Corp., Baltimore, Md.

## —(Spiral Riveted.)

Taylor Forge &amp; Pipe Wks., Chicago, Ill.

## —(Spiral Welded.)

American Rolling Mill Co., Middletown.

## —(Steel.)

Bethlehem Steel Co., Bethlehem, Pa.  
Chicago Bridge & Iron Wks., Birmingham.  
Jones & Laughlin Steel Corp., Pittsburgh, Pa.  
National Tube Co., Pittsburgh, Pa.  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Power Piping Co., Pittsburgh, Pa.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

## —(Steel, Large Diameter.)

Alco Products, Inc., New York, N. Y.

## —(Wrought Iron.)

Reading Iron Co., Reading, Pa.

## —Covering (Cork.)

United Cork Companies, Lyndhurst, N. J.

## —Fittings.

Amer. Cast Iron Pipe Co., Birmingham.  
Georgia Iron Works, Augusta, Ga.

## —Machinery (Concrete.)

Quinn Wire &amp; Iron Works, Boone, Iowa.

## —Unions and Joints.

Dart Mfg. Co., E. M., Providence, R. I.

## —Systems (Industrial.)

Moore Pipe & Sprinkler Co., Jacksonville, Fla.  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Power Piping Co., Pittsburgh, Pa.  
Southern Automatic Sprinkler Company, Birmingham.

## PLATES (Steel.)

American Rolling Mill Co., Middletown.  
Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Central Iron & Steel Co., Harrisburg, Pa.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Gulf States Steel Co., Birmingham, Ala.  
Jones & Laughlin Steel Corp., Pittsburgh, Pa.  
Ryerson & Son, Inc., Jos. T., St. Louis and New York.  
Tennessee Coal, Iron & Railroad Co., Birmingham.

## PLOWS (Mechanical.)

Federal Farm Equipment Co., Jacksonville, Fla.

## POLES (Creosoted.)

Amer. Creosote Wks., Inc., New Orleans.  
Amer. Creosoting Co., Inc., Louisville, Ky.  
Atlantic Creosoting Co., Norfolk, Va.  
Ayer & Lord Tie Co., Inc., Chicago.  
Brown Wood Preserving Co., Louisville, Ky.

## —(Tubular, Steel.)

Bessemer Galvanizing Works, Birmingham, Ala.  
National Tube Co., Pittsburgh, Pa.

## —(Yellow Pine.)

Jackson Lumber Co., Lockhart, Ala.

## —(Zinc Meta Arsenite Treated.)

Curtin-Howe Corp., New York City.

## POLISHING MACHINERY.

(Wheels, Blocks.)  
Carborundum Co., Niagara Falls, N. Y.

## POSTS, (Cast Iron, Railway and Highway.)

U. S. Pipe & Foundry Co., Burlington, N. J.

## POWER TRANSMISSION MACHINERY.

Diamond Chain & Mfg. Co., Indianapolis.  
Goldens' Fdry. & Mch. Co., Columbus, Ga.  
Schodfeld's Sons Co., J. S., Macon, Ga.

## PREHEATERS (Air.)

Combustion Engr. Corp., New York City.

## PRESSES, (Baling, Cottonseed Oil, Hydraulic and Power.)

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
Ripley Foundry & Machine Co., Ripley, O.

## —(Metal Stamping.)

Bliss Co., E. W., Brooklyn, N. Y.

## PRINTERS (Book, Catalog, Job.)

Smith & Son Co., Oscar T., Baltimore, Md.  
Young & Selden Co., Baltimore, Md.

## PRODUCER (Gas Machines.)

Wood &amp; Co., R. D., Phila., Pa.

## PULLEYS (Friction Clutch.)

Caldwell Co., Inc., W. E., Louisville, Ky.

## —Shafting and Hangers.

Goldens' Fdry. &amp; Mch. Co., Columbus, Ga.

## PULVERIZED COAL EQUIPMENT.

Combustion Engr. Corp., New York, N. Y.  
Fuller Lehigh Co., Fullerton, Pa.

## PULVERIZERS (See Crushing and Pulverizing Machinery.)

## PUMPING MACHINERY.

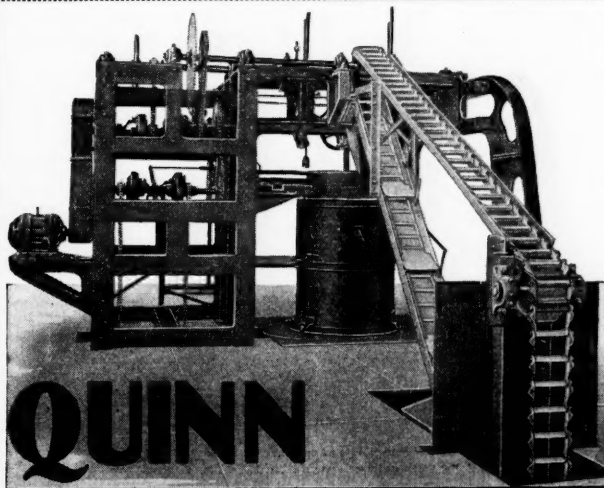
American Well Works, Aurora, Ill.  
Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.  
Fairbanks, Morse & Co., Chicago, Ill.  
Ingersoll-Rand Co., New York City.  
Myers & Bro. Co., The F. E., Ashland, O.  
Petersburg Mchry. Pump & Well Co., Petersburg, Va.  
Virginia Mchry. & Well Co., Richmond, Va.

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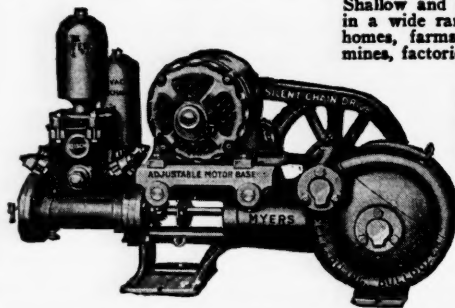
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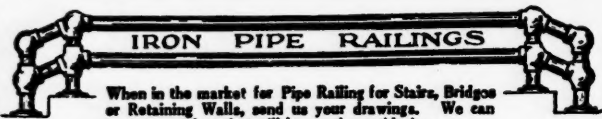
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Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
American Well Works, Aurora, Ill.  
Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.  
DeLaval Steam Turbine Co., Trenton, N.J.  
Fairbanks, Morse & Co., Chicago, Ill.  
LaBour Co., Elkhart, Ind.  
Layne & Bowler, Inc., Memphis, Tenn.  
Manistee Iron Works Co., Manistee, Mich.

—(Deep Well.)  
American Well Works, Aurora, Ill.  
Layne & Bowler, Inc., Memphis, Tenn.

—(Hydraulic.)  
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

—(Power.)  
American Well Works, Aurora, Ill.

—(Pulverized Coal.)  
Fuller Lehigh Co., Fullerton, Pa.

—(Sand and Dredging.)  
Georgia Iron Works, Augusta, Ga.

—(Steam.)  
Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.  
Fairbanks, Morse & Co., Chicago, Ill.

—(Water Works.)  
American Well Works, Aurora, Ill.  
Layne & Bowler, Inc., Memphis, Tenn.  
Manistee Iron Works Co., Manistee, Mich.

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Whitney Metal Tool Co., Rockford, Ill.

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Zellicker Supply Co., W. A., St. Louis.

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Norfolk & Western Railway, Roanoke, Va.

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Hyman-Michaels Co., Chicago, Ill.  
Perry, Buxton, Doane Co., Philadelphia.  
Robinson & Orr, Pittsburgh, Pa.  
Smith & Co., W. M., Birmingham, Ala.  
Southern Iron & Equip. Co., Atlanta, Ga.  
Sweet's Steel Co., Williamsport, Pa.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Zellicker Supply Co., W. A., St. Louis.

**RAILWAYS (Marine.)**

Charleston Dry Dock and Machine Co., Charleston, S. C.

**RECEPTACLES (Self-Closing — Waste Paper.)**  
Whitaker Paper Co., Baltimore, Md.

**REINFORCING for Concrete.**

American Steel and Wire Co., Balto., Md.  
Austin Bros. Bridge Co., Atlanta, Ga.  
Carnegie Steel Co., Pittsburgh, Pa.  
Dietrich Brothers, Baltimore, Md.  
Gulf State Steel Co., Birmingham, Ala.  
Jones & Laughlin Steel Corp., Pittsburgh, Pa.  
Oliver Iron & Steel Corp., Pittsburgh, Pa.  
Ryerson & Son, Inc., Jos. T., St. Louis and New York.  
Southern Engineering Co., Charlotte, N. C.

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Atlantic Gulf and Pacific Co., New York.  
Kansas City Bridge Co., Kansas City.

**RIVETS.**

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

**ROAD and Street Machinery.**

Austin-Western Road Machy. Co., Chicago.  
Blaw-Knox Co., Pittsburgh, Pa.  
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Erie Machine Shops, Erie, Pa.  
Gillie Machine Co., Tonawanda, N. Y.  
Universal Crane Co., Lorain, Ohio.

**—and Street Material.**

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Woodstock Slag Corp., Birmingham, Ala.

**—Graders and Scrapers.**

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**—Tiles.**

Federal-American Cement Tile Co., Chicago.

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York Safe & Lock Co., York, Penna.

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**SCREWS (Machine.)**  
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Lee Clay Products Co., Clearfield, Ky.  
Owensboro Sewer Pipe Co., Owensboro, Ky.  
—Pipe Machinery (Concrete.)  
Quinn Wire & Iron Works, Boone, Iowa.

**SHAFTING.**  
Byerson & Son, Inc., Jos. T., St. Louis and New York.  
—Material (Tubular.)  
National Tube Co., Pittsburgh, Pa.

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Carborundum Co., Niagara Falls, N. Y.

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Whitney Metal Tool Co., Rockford, Ill.  
Yoder Co., The, Cleveland, Ohio.  
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Bethlehem Steel Co., Bethlehem, Pa.  
Gulf States Steel Co., Birmingham, Ala.  
Byerson & Son, Inc., Jos. T., St. Louis and New York.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Youngstown Sheet & Tube Co., Youngstown, O.

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—(Galvanized and Black.)  
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American Sheet & Tin Plate Co., Pittsburgh, Pa.

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Thew Shovel Co., The, Lorain, Ohio.

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Crisp County Power Commission, Cordele, Ga.  
Galveston, City of Galveston, Texas.  
Missouri-Kansas-Texas Lines, Dallas, Tex.  
Model Land Company, (Flagler System), St. Augustine, Fla.  
Norfolk & Western Railway, Roanoke, Va.  
Parkersburg, W. Va., Board of Commerce.  
Reynolds Bros. Lbr. Co., Albany, Ga.  
Southern Natural Gas Corp., Birmingham.  
Texas Power & Light Co., Dallas, Texas.

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Federal-American Cement Tile Co., Chicago.

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Woodstock Slag Corp., Birmingham, Ala.

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Sweet's Steel Co., Williamsport, Pa.

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—(Wire—All Kinds.)  
American Steel & Wire Co., Balto., Md.

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Southern Automatic Sprinkler Co., Birmingham.

**SPROCKETS.**  
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**STACKS (Iron and Steel.)**  
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Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Downingtown Iron Works, Downingtown, Pa.  
Hedges Walsh Weldner Co., Chattanooga, Tenn.  
Ingalls Iron Works Co., Birmingham, Ala.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
U. S. Pipe & Foundry Co., Burlington, N. J.  
Virginia Bridge & Iron Co., Roanoke, Va.

**STAINS (Shingle, Woodwork.)**  
Cabot, Inc., Samuel, Boston, Mass.

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Central Iron & Steel Co., Harrisburg, Pa.  
Byerson & Son, Inc., Jos. T., St. Louis and New York.

**STANDPIPES.**  
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Chicago Bridge & Iron Wks., Birmingham.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

**STATIONERS (Envelopes, Letter and Billheads, etc.)**  
Smith & Son Co., Oscar T., Baltimore, Md.  
Young & Selden Co., Baltimore, Md.

**STEAM (Specialties.)**  
Lunkenheimer Co., The Cincinnati, O.  
Mueller Co., Decatur, Ill.

**STEEL.**  
Bethlehem Steel Co., Bethlehem, Pa.  
Central Iron & Steel Co., Harrisburg, Pa.  
Dietrich Brothers, Baltimore, Md.  
Gulf States Steel Co., Birmingham, Ala.  
Jones & Laughlin Steel Corp., Pittsburgh, Pa.  
Oliver Iron & Steel Corp., Pittsburgh, Pa.  
Byerson & Son, Inc., Jos. T., St. Louis and New York.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Virginia Bridge & Iron Co., Roanoke, Va.

—(Alloy.)  
Timken Roller Bearing Co., Canton, Ohio.

—(Cold Rolled.)  
American Steel & Wire Co., Balto., Md.

—(Fabricators.)  
United Welding Co., Middletown, O.

—(Special Analysis.)  
Timken Roller Bearing Co., Canton, Ohio.

—(Tool, High Speed.)  
Bethlehem Steel Co., Bethlehem, Pa.

—Buildings (Designers and Builders.)  
American Bridge Co., New York, N. Y.

Belmont Iron Works, Philadelphia, Pa.  
Carolina Steel & Iron Co., Greensboro, N. C.

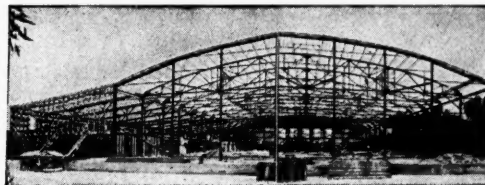
Ingalls Iron Works Co., Birmingham, Ala.  
McClintic-Marshall Co., Pittsburgh, Pa.

Phoenix Iron Co., The, Phila., Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Virginia Bridge & Iron Co., Roanoke, Va.

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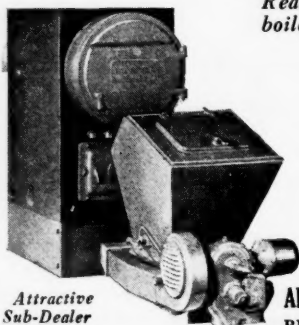
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Downingtown Iron Works, Downingtown, Pa.  
Hedges Walsh Weldner Co., Chattanooga, Tenn.  
Ingalls Iron Works Co., Birmingham, Ala.  
Phoenix Iron Co., The, Phila., Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
Traylor Engr. & Mfg. Co., Allentown, Pa.  
United Welding Co., Middletown, O.

## STILLS.

Alco Products, Inc., New York City.

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Alabama Stoker & Boiler Co., Birmingham, Ala.  
Babcock & Wilcox Co., The, New York.  
Combustion Engr. Corp., New York City.  
Detroit Stoker Company, Detroit, Mich.

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Butler Bin Co., Waukesha, Wis.

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Austin Bros. Bridge Co., Atlanta, Ga.  
Belmont Iron Works, Philadelphia, Pa.  
Bristol Steel & Iron Works, Inc., Bristol, Va.  
Carnegie Steel Co., Pittsburgh, Pa.  
Carolina Steel & Iron Co., Greensboro, N. C.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Converse Bridge & Steel Co., Chattanooga, Tenn.  
Dietrich Brothers, Baltimore, Md.  
Ingalls Iron Works Co., Birmingham, Ala.  
Jones & Laughlin Steel Corp., Pittsburgh, Pa.  
McClintic-Marshall Co., Pittsburgh, Pa.  
Phoenix Iron Co., The, Phila., Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Roanoke Iron & Bridge Works, Inc., Roanoke, Va.  
Ryerson & Son, Inc., Jos. T., St. Louis and New York.  
Snead Architectural Iron Works, Louisville, Ky.  
Southern Engineering Co., Charlotte, N. C.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Virginia Bridge & Iron Co., Roanoke, Va.

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## SULPHIDE OF SODA.

Grasselli Chemical Co., Inc., Birmingham.

## SULPHURIC ACID.

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Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

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Technical Service Co., New York, N. Y.

## —(Quantity.)

Martin, Joe B., Charlotte, N. C.

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## SWINGING ENGINES.

Dake Engine Co., Grand Haven, Mich.

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Cole Mfg. Co., R. D., Newnan, Ga.  
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Schofield's Sons Co., J. S., Macon, Ga.  
Virginia Bridge & Iron Co., Roanoke, Va.

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Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Cole Mfg. Co., R. D., Newnan, Ga.  
Downingtown Iron Works, Downingtown, Pa.  
Finnigan Co., Inc., J. J., Atlanta, Ga.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
McClintic-Marshall Co., Pittsburgh, Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
Titusville Iron Works Co., Titusville, Pa.  
Virginia Bridge & Iron Co., Roanoke, Va.  
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Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Downingtown Iron Works, Downingtown, Pa.  
Ingalls Iron Works Co., Birmingham, Ala.  
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Titusville Iron Works Co., Titusville, Pa.  
United Welding Co., Middletown, O.

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Davis & Son, G. M., Palatka, Fla.  
Virginia Mch. & Well Co., Richmond, Va.

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Federal-American Cement Tile Co., Chicago.

## —(Cork Composition.)

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## —(Cork Flooring.)

Congoleum-Nairn Inc., Kearny, N. J.  
United Cork Companies, Lyndhurst, N. J.

## —(Floor.)

Hood Co., B. Miffin, Daisy, Tenn.

## —(Roof.)

Hood Co., B. Miffin, Daisy, Tenn.

## —(Sewer.)

Lee Clay Products Co., Clearfield, Ky.

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Amer. Creosoting Co., Inc., Louisville, Ky.

## TIN AND TERNE PLATES.

American Sheet & Tin Plate Co., Pittsburgh, Pa.  
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—(Radio).  
Bessemer Galvanizing Works, Birmingham, Ala.

—(Steel and Wood).  
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Sweet's Steel Co., Williamsport, Pa.

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Caterpillar Tractor Co., Peoria, Ill.  
Clark Tractor Co., Battle Creek, Mich.  
International Harvester Co. of America, Inc., Chicago, Ill.

—(Road).  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Caterpillar Tractor Co., Peoria, Ill.

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Williams Co., G. H., Erie, Pa.

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American Steel & Wire Co., Balto., Md.

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General Electric Co., Schenectady, N. Y.

—(Used).  
Electric Service Co., Cincinnati, O.

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Excavators (Trench.)

**TRI-SODIUM PHOSPHATE**.  
Grasselli Chemical Co., Inc., Birmingham.

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Universal Crane Co., Lorain, O.

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Tubes.

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National Tube Co., Pittsburgh, Pa.  
Timken Rolling Bearing Co., Canton, O.

**TURBINES** (Hydraulic).  
Newport News Shipbuilding & Dry Dock Co., Newport News, Va.  
Smith Co., S. Morgan, York, Pa.

—(Steam).  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
DeLaval Steam Turbine Co., Trenton, N.J.  
General Electric Co., Schenectady, N. Y.

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American Bridge Co., New York, N. Y.  
Virginia Bridge & Iron Co., Roanoke, Va.  
—(Portable for Motor Trucks).  
Blaw-Knox Co., Pittsburgh, Pa.

**UNIONS**.  
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Ludlow Valve Mfg. Co., The, Troy, N. Y.  
Lunkenheimer Co., The, Cincinnati, Ohio.  
Merco Nordstrom Valve Co., San Francisco, Cal.  
Mueller Co., Decatur, Ill.  
Newport News Shipbuilding & Dry Dock Co., Newport News, Va.  
Westinghouse Traction Brake Co., Wilmerding, Pa.

—(Acid Proof).  
Lunkenheimer Co., The, Cincinnati, Ohio.

—(Gate).  
Ludlow Valve Mfg. Co., The, Troy, N. Y.  
Lunkenheimer Co., The, Cincinnati, Ohio.  
Wood & Co., E. D., Philadelphia, Pa.

**VAULTS** (Bank and Safe Deposit).  
York Safe & Lock Co., York, Penna.

**VENTILATORS** (Roof).  
Merchant & Evans Co., Philadelphia, Pa.

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Finnigan Co., Inc., J. J., Atlanta, Ga.

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Roberts Filter Mfg. Co., Darby (Phila.), Pa.

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American Water Softener Co., Phila., Pa.  
International Filter Co., Chicago, Ill.

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Glamorgan Pipe & Foundry Co., Lynchburg, Va.

Leadite Co., Philadelphia, Pa.  
Mueller Co., Decatur, Ill.  
U. S. Pipe & Foundry Co., Burlington, N. J.  
Wood & Co., R. D., Philadelphia, Pa.

**WELDING**.  
Charleston Dry Dock & Machine Co., Charleston, S. C.  
Hedges-Walsh-Weldner Co., Chattanooga, Tenn.  
Newport News Shipbuilding & Dry Dock Co., Newport News, Va.  
United Welding Co., Middletown, O.

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Petersburg Mchry. Pump & Well Co., Petersburg, Va.  
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Seneca Wire & Mfg. Co., Fostoria, O.

—(Barbed Wire, etc.).  
American Steel & Wire Co., Balto., Md.  
Gulf States Steel Co., Birmingham, Ala.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

—(Fence).  
Cyclone Fence Co., Waukegan, Ill.  
Robertson Steel & Iron Co., W. F., Cincinnati, O.  
Stewart Iron Works Co., Cincinnati, O.

—(Flat and Round).  
American Steel & Wire Co., Balto., Md.  
Roebbing's Sons Co., John A., Trenton, N. J.  
Seneca Wire & Mfg. Co., Fostoria, O.

—(Galvanized and Annealed).  
Gulf States Steel Co., Birmingham, Ala.  
Seneca Wire & Mfg. Co., Fostoria, O.

—Cloth (Iron, Steel, Copper, Brass, etc.).  
Harrington & King Perf. Co., Chicago.  
Roebbing's Sons Co., John A., Trenton, N. J.  
Seneca Wire & Mfg. Co., Fostoria, O.

—Goods.  
Cyclone Fence Co., Waukegan, Ill.

—Rope (Transmission, Hoisting, Haulage).  
American Steel & Wire Co., Chicago, Ill.  
Roebbing's Sons Co., John A., Trenton, N. J.

—Rope Clips.  
American Steel & Wire Co., Balto., Md.

—Stapling.  
Seneca Wire & Mfg. Co., Fostoria, O.

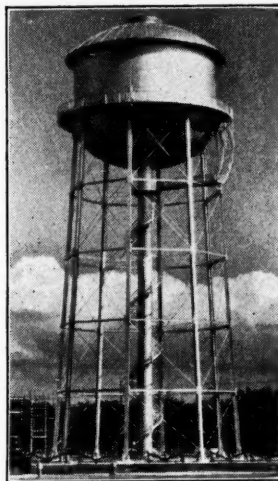
—(Telephone and Telegraph).  
American Steel & Wire Co., Balto., Md.

—(Welding).  
American Steel & Wire Co., Chicago, Ill.  
Roebbing's Sons Co., John A., Trenton, N. J.  
Seneca Wire & Mfg. Co., Fostoria, O.

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Grasselli Chemical Co., Inc., Birmingham.

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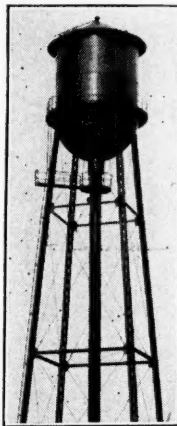
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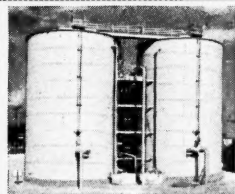
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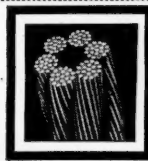
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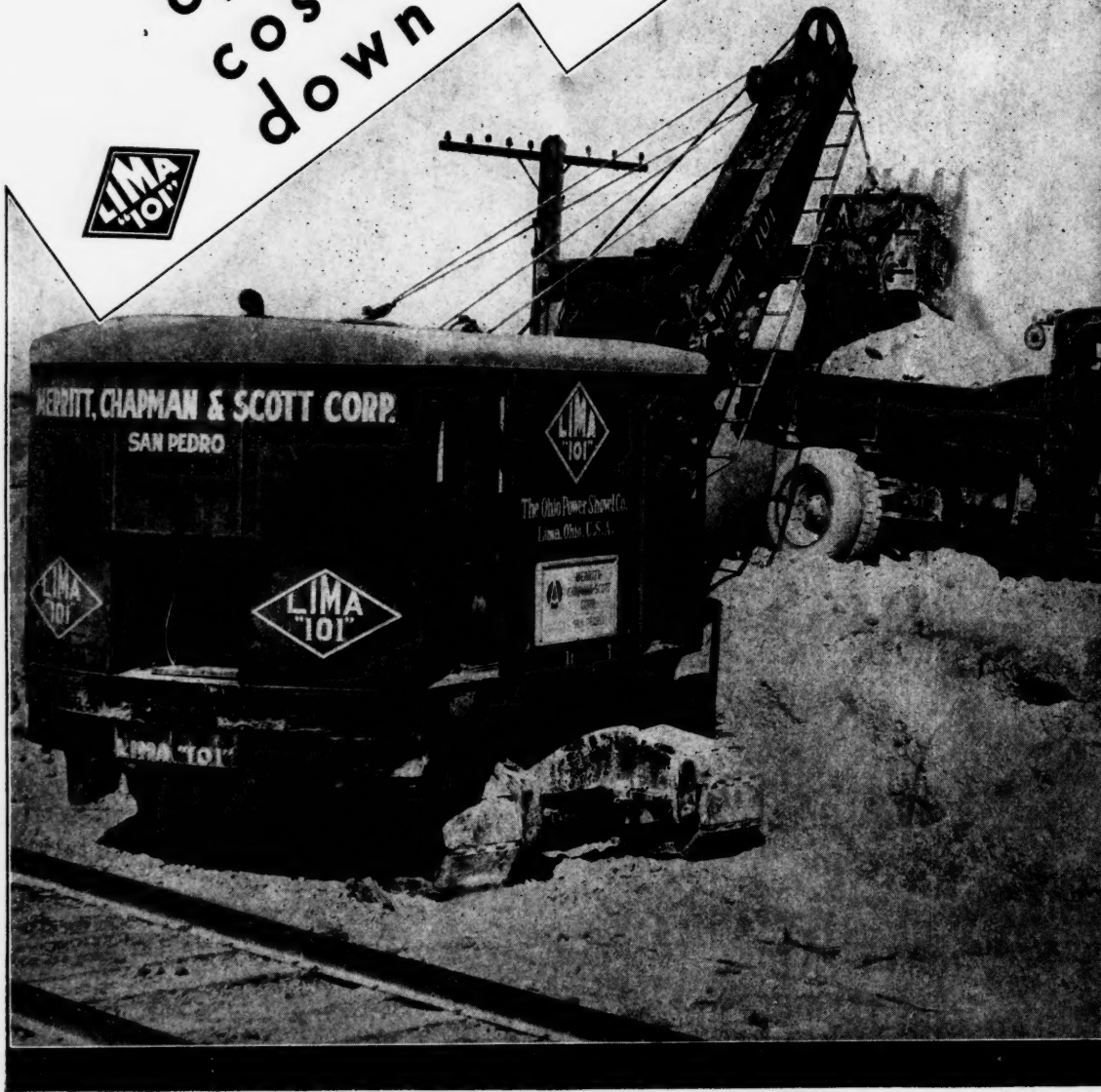
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